Journal of Home Economics

Periodical C

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DETROIT

VOLUME 34 NUMBER 8 PART 1

The Institute on Education and the War
Jessie W. Harris

Wanted: A House to Fit the Family
Andrée Emery

The College Girl Goes to Nursery School
Esther McGinnis

Research in Foods
Edith H. Nason

The Farm Homemaker Faces War
Mary Cunningham Baur

Colorfastness of Women's and Children's Wearing-Apparel Fabrics
Pauline Beery Mack et al.

October 1942

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FOR THE FIRST TIME IN RECENT YEARS

the business proceedings of the AHEA's annual meeting are brought into the JOURNAL OF HOME ECONOMICS, instead of being published in a separate *Bulletin*. It is issued as Part 2 of the October number, however, so that it can be used separately. Most of the convention speeches were carried in the September number but the report on business proceedings had to be held until the financial statement was ready. (Our fiscal year ends July 31.)

FOUR EXCELLENT CONVENTION PAPERS

were held over for this issue, as they contained material which would need no rewriting to make them up to date. A few others will be published in November—some with newer data added.

THE NATIONAL INSTITUTE ON EDUCATION AND THE WAR

is reported upon in this issue by AHEA's president, Jessie Harris, on page 531, and is further commented upon in the Comment section, pages 537–538. In November there will be a follow-up on this vital subject—a manual for home economics teachers.

Journal of Home Economics

VOLUME 34
NUMBER 8
PART 1

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ROUND	Heel of Round
CHUCK	Blade Bone, Round Bone, Boneless Chuck
BRISKET	Brisket

VEAL

RUMP	Rump, Rolled Rump
SHOULDER	Round Bone, Blade Bone, Cushion Shoulder, Rolled Shoulder

HOW TO PREPARE A POT ROAST

1. Wipe meat with damp cloth. Season with salt and pepper.

2. Dredge with flour, if desired.

3. Brown meat on all sides in hot fat. (The fat may be that which melts out of the meat or may be added.)

4. Add small amount of liquid, if necessary. If liquid cooks away, a little more may be added. (The meat has a richer brown color and better flavor if the liquid in the kettle is kept to the minimum.)

5. Cover tightly. (Vegetables are added ½ to 1 hr. before meat is done.)

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1. Instead of water, use 2 cups of tomato juice, ½ clove of garlic.

2. Pour contents of a small bottle of horse-radish over the meat.

3. Season with ½ bay leaf, a pinch of thyme and a few sprigs of parsley.

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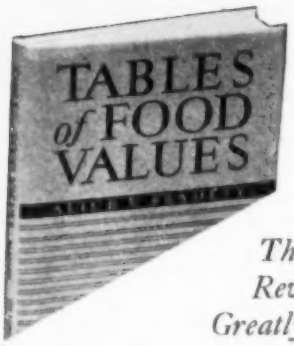

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Educational Department

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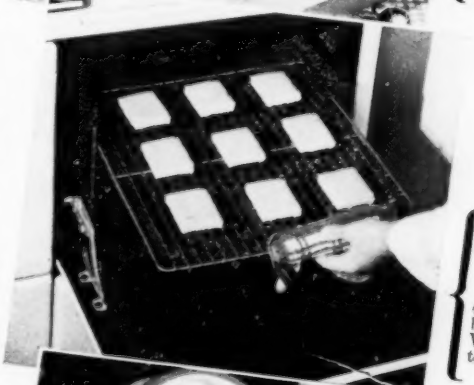

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Boston Post 3/10/42

OPEN DRIVE FOR BETTER LUNCHES

Wives of War Workers Told How They Can Do Their Share by Packing Right Kind of Food

WASHINGTON, Aug. 9 —— Memo to wives of war workers:

Pack those lunch pails carefully, ladies. They carry a powerful punch—14,000 bombers, 10 dreadnaughts and 33,000 tanks.

That comes direct from Paul V. McNutt, administrator of the defense health and welfare services and chairman of the War Manpower Commission.

Pointing out that 24 million man-hours are being lost monthly on the production front, McNutt blamed much of the loss on improper nutrition. He announced today that a national industrial nutrition programme will be launched to conserve manpower as well as increase war production.

"At least 80,000,000 working days can be saved this year if war workers keep fit," the manpower chief said, adding that this could be translated into the aforementioned numbers of planes, ships and tanks.

The problem will be attacked on three fronts—in the industries, in homes and in communities—McNutt said. Chief among these he listed as the home "where 8,000,000 lunches are packed for war workers every day. A big war job for American women is to see that these lunches contain the right food, prepared to provide strength and health protection for American soldiers of

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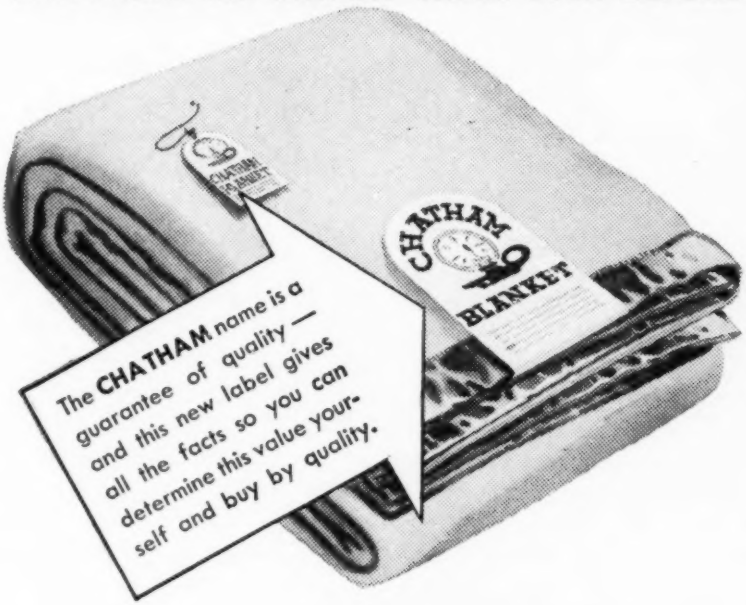
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Washington News

● At once inspiring and exhausting was the 4-day National Institute on Education and the War called in Washington August 28 to 31 by the U. S. Office of Education Wartime Commission. (See page 531.) Though many of the invitations were issued only a week or a few days ahead, more than 600 educators representing every state and Alaska attended. Jessie Harris and Edna Van Horn were official representatives of AHEA.

● September 28, at 5:30 EST, red network of NBC will carry a follow-up program on the Institute—excellent material for home economics discussion groups. District of Columbia Home Economics Association will have a dinner meeting to tie in: Will listen to the radio, eat, have panel discussion on home economics and the war. Among panel members: Edna Amidon, chairman; Dr. James Mendenhall, OPA; Mrs. Jeanette Hess, Mrs. Elmer Nelson, Ruth Jean Yager, Edna Van Horn, representing, respectively, public school teachers, student clubs, and the American Home Economics Association.

● NB—State legislative committees et al: More funds for maternal and child health services, for crippled children, and for child welfare services are provided for in a bill introduced August 25 into the Senate (S. 2738), August 27 into the House (HR. 7503), via letter (from President Roosevelt) to Senator George, chairman of the committee on finance requesting such action. Letter states: "The impact of war upon family life has created urgent needs which previously authorized federal appropriations combined with state and local funds have not been able to meet." The President's suggested sum: $7,500,000 a year for the duration and six months thereafter. Bill is now in committee.

● From the President's emergency fund, $400,000 has been allocated to Defense Health and Welfare Services for grants in aid to the states for day care of children. To be administered by the U. S. Office of Education (Bess Goodykoontz in charge) and the Children's Bureau (Mrs. Hazel Frederickson in charge). Probable use: for consultants to go into the field, some professional personnel in nursery schools.

● New Federal Trade Commission rulings as to colorfastness of all textiles are soon to be announced. Public's last chance to register objections to proposed rules in public hearing was on September 9 and 10 in New York City, where Mrs. Pauline Beery Mack of Pennsylvania State College was AHEA's effective spokesman.

Proposed rules: all textiles labeled Grade A, B, C, D on each of six counts: light, washing, dry cleaning, pressing, perspiration, crocking; nothing labeled "washable," "tubbable," or "launderable" if a residual shrinkage of more than 2 per cent by Commercial Standard 59–41. Considerable opposition from many branches of the industry. Among backers (some of whom wanted minor changes): AHEA, Consumer Division of OPA, American Association of University Women, American League of Women Voters.

● A standards division for Office of Price Administration was announced by Leon Henderson September 6—work no longer carried on under consumer division of OPA. (See page 538.)

Dexter M. Keezer is acting director of the division; Willis MacLeod, chief of technical operations; Dickson Reck, MacLeod's senior technical associate. All have been with OPA for some time. Keezer has been president of Reed College since 1934; MacLeod has had 16 years with Standard Oil Company and an affiliate, in which he had charge of standardizing refining equipment and materials; Reck was iecturer in Wharton School of Finance and Commerce, University of Pennsylvania, and has had 10 years as assistant to general manager of Square D Company, Detroit.

● New contract between U. S. government and American Standards Association: ASA to develop emergency standards for OPA and War Production Board. (See page 538.)

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Wanted: A House to Fit the Family

ANDRÉE EMERY

Andrée Emery was born in Hungary and studied economics and public administration at the University of Budapest. Since coming to the United States she has studied in Bryn Mawr College, the Brookings Institution, and Columbia University and has lectured on economics and sociology in various American schools. She directed the family living study herein reported, and is now one of the consultants for the committee on the hygiene of housing of the American Public Health Association. Her article is based on the talk she gave at the Boston meeting of the AHEA.

WARS always bring drastic changes in their wake. Old customs and traditions are swept aside and new values, new standards are created. After World War I, not only our industrial processes but our national habits and mores changed, probably more fundamentally than they did at any time since the Revolution.

Postwar Innovations

We rightly expect similar basic changes to come after this war, changes which will be even more far-reaching than those experienced twenty-five years ago. They will affect many million more people on all continents.

Some of these basic changes will take place in an undramatic and gradual way which does not mean that they are less important than more spectacular innovations. Among these will be the rebuilding of cities, regions, and entire countries—without exaggeration one of the most important and most fundamental changes to come in the current century. This step is unavoidable, because large areas are being completely devastated or badly damaged and because unprecedented population shifts are taking place which somehow will have to be stabilized after hostilities cease.

Moreover, the gearing of industry from wartime to peacetime tasks will result in mass unemployment—at least for a temporary period—unless this is effectively forestalled by large-scale building operations or other capital projects, planned now and put into effect immediately after demobilization.

Government agencies as well as other planning groups here and in Great Britain are seriously considering such postwar rehabilitation plans. Learning from the experiences of the last war and the present emergency, they are carefully studying the industrial, commercial, and transportation aspects of the problem.

Because the importance of human resources has been thrown into bold relief by the war, it is safe to assume that health, education, and recreation facilities will not be forgotten. There is however, one side of postwar housing which has not been given the consideration

commensurate with its importance: the design of the home itself —perhaps because we are all conservatives when it comes to basic living habits, no matter how progressive we may be in our intellectual approaches. Lack of time, lack of money, emergency demands on the time of professional personnel may be valid excuses; but the fact still remains that we are building and will build millions of homes without knowing much about the living habits of the families to be housed.

Social Lag in Home Planning

The family is the basic unit of our society. With it stands or falls our civilization. Its health, mental as well as physical, its resiliency, its powers of co-operation are the tokens of our success as a nation. The social, educational, recreational, and health developments of the last 50 years bear witness to our awareness of this fact. At the same time the home, in which the family spends the greater part of its life, and in which its most important activities center, did not keep pace with the development.

To be sure, kitchens are more modern and bathrooms gleam with colored tile, but the social lag in home planning expresses itself in serious contradictions. We give children model schools and no place to study at home, beautiful parks and playgrounds and no place to play on a rainy day. We are proud of the superior working conditions in modern industrial plants but let the working man return to a noisy home, lacking privacy, where he cannot get a night's well-deserved rest. We produce handsome goods at a low price which tempt the consumer to purchase when she has no place at home to store them. We build modern hospitals and institutions while the homes are not equipped to care for the everyday sicknesses which occur in all families.

Good housing does not mean merely sanitary facilities and plausible cubage. It should mean a shelter in which the individual—as well as the family group—can get the rest, relaxation, and stimulus that enable him to perform his duties toward society.

The APHA-Pierce Foundation Survey

These were the thoughts which prompted the committee on the hygiene of housing of the American Public Health Association to explore methods for a comprehensive survey which would shed light on the physical standards necessary to make family life comfortable and would produce results which could serve as a basis for rational dwelling design. As the housing research division of the John B. Pierce Foundation planned some research in the same field, a preliminary study was launched under joint sponsorship.

It is not possible to give a detailed account of this study in the limits of a short article. It entailed a good deal of theoretical work, the canvassing of applicable research methods, and a field investigation. For this field investigation a homogeneous group of families was selected to permit sound generalization despite the smallness of the sample. The control factors were carefully chosen to approximate what is commonly known as the "typical American family."

These selected families had an annual income between one and two thousand dollars. Originally it was intended to include only families with an income of from fifteen hundred to eighteen hundred dollars a year, but plans had to be modified when tenants of public housing projects were included.

All parents were American born, white, under 40 years of age, with two children less than 10 years old. Adult members had at least an eighth grade education but none beyond high school. The fathers had been employed continuously for a year or more and with one exception worked during the daytime. The mothers had no gainful occupation and kept house without paid help. Half of the families lived in government-subsidized public housing projects, and the other half in rented dwellings.

Detailed plans were prepared of all the dwellings, including the measurements of furniture and furnishings and the measurements of artificial light intensity; and a complete inventory was made of all family and

personal possessions. The adults in the families were requested to keep for one or two weeks a detailed diary of their activities as well as of the time, duration, and location of these activities. They were interviewed at different times in regard to their habits and preferences concerning the following functions and modus operandi: sleeping, personal hygiene and dressing, care of clothes, food preparation and eating, housecleaning, heat and ventilation, storage space and facilities, care and supervision of children, leisure-time activities, social activities, home care of the sick, daytime rest, and privacy.

Obviously such a study could be carried out only with sympathetic and intelligent cooperation on the part of the participating families, who received a small compensation for their time and effort.

Faulty Design, Frustration

Much evidence of frustration and poor functioning was found which could be attributed to faulty design and planning. Some of the obstacles to a well-balanced family life could be easily eliminated by more careful planning without appreciable addition to building costs. To remedy others might mean a radical change in the current approach to home planning. To formulate standards on some aspects of the problem, considerable research will be required.

In the limits of this article only a few of the most common sources of friction can be cited. These may seem commonplace to home economists, but that does not alter the fact that—no matter how detrimental the effects—they persist and are accepted as part of "woman's burden."

Heating

While previous and current studies have shed considerable light on the temperatures desirable for many of the normal activities of adults in good health, there is room for much further research as well as for improvement in building practice. Little is known about thermal requirements of infants and children at rest and at play, of infirm or elderly persons, and of adults engaged in specific activities such as sleeping, dressing, cooking.

In the course of the study it was found, for example, that hospital rooms are generally overheated while homes are underheated for the needs of the sick and infirm. But to develop the optimum standard, further technical studies will have to be made. We are equally ignorant in regard to the best temperature for sleeping persons of various ages and different sex. While we know that most housewives suffer considerably in kitchens overheated by the cooking process, little has been done to control this undesirable condition.

Artificial Lighting

A special study was made to determine the type of artificial lighting used as well as the intensity of illumination in all work and use centers. Measurements were taken where the light was used; for example, on the book read by the person in bed, on the notebook of the studying child, at the open closet door when looking for a dress or suit, at the sink, at the stove.

As might have been expected, the results were discouraging. One reading light near father's favorite chair in the living room was usually tolerable, but all other light sources in all other use centers were much below par. Only 10 per cent of the kitchens had sufficient light for cooking and at the refrigerator, and only 30 per cent had enough light for dishwashing.

Storage Space

The analysis of the dimensions and layout of storage space in relation to family possessions revealed this as a fertile field for further investigation. Despite the good work done by Maud Wilson and other home economists, there is much room for improvement. Closets and cupboards are rarely built according to the intelligent suggestions of Miss Wilson and even where they are acceptable in design, they rarely suffice to hold the family's possessions. One of the reasons for this, undoubtedly, is the

preconceived idea that families who have small incomes do not have many possessions. If the families included in this study are typical, the contrary seems to be true. Possessions of low and medium income families differ more in quality than in quantity. As a matter of fact, the poorer families are more apt to save things for possible future uses. Moreover, every family accumulates some objects with strong emotional associations, which may seem junk to the outside observer. Still, no home economist or builder has the right to demand that the family throw them away.

Lack of storage space is a source of frequent and serious friction in families. One husband described the situation caustically: "I catch my suspenders in the vacuum cleaner handle, and the carpet sweeper is parked on top of my shoes." He was justified in his complaint, but the situation was not easier for his wife, who had to pull the vacuum cleaner out from beneath his pants.

Inconvenient storage space is often responsible for inefficient housekeeping. Women do not use their vacuum cleaners, electrical appliances, or the larger pieces of cooking equipment, because to move them requires a special effort.

While modern refrigerators are a great improvement, the marketing habits of the families indicate that further thought should be given to the problem of food storage space. Most families shop once or twice a week, and this practice is sound in view of the distance to super-markets and other low-priced stores and in view of the general work schedule of a mother with small children and no household help.

Special problems are presented by storage space for children's things, especially toys, for toilet items, for sleeping accessories such as extra blankets and dressing gowns, and for the paraphernalia which people want to keep near their bed.

Food Preparation and Eating

It will be no surprise to home economists that we found the kitchens badly planned and inadequate as to work space. But to give these home economists a special nut to crack, we would like to focus their attention on the problem of extra meals and repeated servings. Fifty per cent of the housewives had to serve more than one breakfast in the morning, and 30 per cent served dinner in two installments. As this seems to be a general trend in present-day America, serious thought should be given to space requirements for cooking on the installment plan.

Kitchens in the housing project could have been entirely satisfactory with but slight changes in plans and arrangement. As it was, the housewife had to prepare the food on the dining table. The nonproject kitchens were even worse, and the higher-priced units were no better than the low-rent ones.

The location of the dining space is a much disputed question, and many architects and home planners seem to think that a dining room is wasted space. We found a unanimous demand for at least a dinette, separated from both the kitchen and the living room.

This demand for a dining room has more to it than a need for eating space. There are many uses in a family for an extra room with a large table, and we found that this is the room where women attend to their special tasks and hobbies, such as sewing, the editing of cooking recipes, reports of club meetings, while the living room is occupied by the children and the husband. Many families also feel the need for a room for family celebrations, the entertaining of guests, and other special occasions.

Entertaining

Planners for public housing projects often hear the argument that low-income families do not need space for entertaining. The truth is that higher-income families can afford recreation outside the home while the low-income families are restricted to their homes for their leisure-time activities. The families included in this study entertained surprisingly much: the majority, five to eight persons a week and at least once a week; but many, twice or more.

According to leading sociologists, Americans

are apt to be active in some organization. This was borne out by our study. More than half of the men and more than half of the women belong to at least one organization. While the husbands' organizational activities did not entail much home entertaining, the women were expected to invite the members of their club, lodge, or chapter at stipulated periods.

The Care of Children

We deliberately limited our study to families with children under 10 years of age so as to exclude problems connected with adolescents. As the activities related to child care are exceedingly complex however, it is impossible to describe here even sketchily the findings of the survey. It may be said, however, that houses are not planned to permit efficient physical care of children or satisfactory supervision by the mother; furthermore they lack indoor play space and other essentials for the best development of children.

The Care of the Sick

Temporary sickness is a normal occurrence in every family, especially a family with small children. According to the Visiting Nurse Association of New Haven, there are in hospitals and other institutions a good many persons who should be in the home but cannot be there because of lack of space and facilities. The report of the study includes specifications for space for the home care of the sick, prepared in co-operation with the supervisors of the Visiting Nurse Association of New Haven.

Rest and Privacy

After a day's hard work at an outside occupation or in the house, every person is entitled to complete relaxation and rest. But it is not easy to get this rest in the average home today, at least not in those included in our sample.

Traffic noises, structure-born noises, sounds coming from neighboring dwellings, sounds within the dwelling and the room disturb the sleeper. Noise raises blood pressure even though the sleeper may not be awakened. His nervous system is adversely affected, and he does not get the full recuperative benefit of his sleep. Little or nothing has been done to control this nuisance.

Shades help to keep out morning light from the bedroom, but give little protection from the morning sun and on hot summer nights a shade obstructs ventilation. Nevertheless, few of the bedrooms are oriented so that the sleeper can avoid morning light. Only one bedroom in the housing project sample was so planned that the bed could be placed out of reach of sunrays. Worse yet, there was before every bedroom in the project a streetlight which shown cheerily through the window all night long.

Little is known about other comforts necessary for sound sleep. No scientific standards have yet been developed even for such elementary factors as bed measurements or the best type of bedding.

The average dwelling offers even less possibility for daytime rest and privacy than it does for undisturbed night sleep. The women seem to suffer especially from the lack of opportunity for occasional solitude.

Recommendations

This preliminary study did not undertake to solve the problem of family living functions and habits in relation to space planning. Its purpose was to explore the scope as well as the limits of the problem and to develop efficient methods for a more thorough investigation, because of the vastness of the problem.

This proposed study must necessarily be a complex undertaking. It must be subdivided into a number of physiological and sociological studies, motion and time studies, psychological studies, mechanical studies, as well as general research.

But all these must be undertaken in a coordinated fashion, and the results must be integrated. Many of the detailed studies could be undertaken by government agencies and university departments, especially home economics departments. It is hoped that means will be found by which this important task can be accomplished.

The College Girl Goes to Nursery School

ESTHER McGINNIS

Dr. McGinnis's professional career has included serving as head of the home economics department at the University of Maine, as head of the parent education department at the University of Minnesota, as field worker in child development and parent education for the AHEA, and her present position as professor of family life education at State Teachers College, Buffalo, N. Y.

IN the center of the large, sunny room was an elaborate block structure, subdivided into many square, boxlike rooms. "Why are your roofs so flat?" asked the teacher. "That's the way houses are," was the answer.

In another even larger semi-basement room, Negro children were grouped around a piano singing lustily about the "Robin Redbreast" they had seen that morning on their walk. They sang and sang, expressing their keen delight in rhythm and action, and asking for popular radio songs such as "You Are My Sunshine," individual children shouting and singing for the whole group. Teachers and children were completely lost in the happiness of music.

"What colorful curtains with their red decorations!" exclaimed the college student.

"The mothers made them," the teacher explained. "Italian families love bright colors in their homes, you know. Do look at the paintings the children have been making. We are so proud of them. Many of them are quite advanced for such young children, and they show unusual color sensitiveness."

Each Housing Project a Nursery School

Each of the four federal housing projects in Buffalo (Kenfield, Willert Park, Lakeview, and Commodore Perry) has a Work Projects Administration nursery school with two full-time teachers, a cook, and an NYA helper who comes at rush times in the schedule. The children, $2\frac{1}{2}$ to $4\frac{1}{2}$ years old, are among the residents of the projects. In addition, there are three other WPA schools housed in a settlement house, a neighborhood house, and a community center. The average enrollment is about thirty.

Mothers, organized in groups, meet once a week for observation in the schools, for discussion of the problems of child rearing, and for social activities and fun. Each month there is an evening meeting for mothers and fathers, with project discussions, parties, and refreshments.

Sometimes one of the teachers is the leader, sometimes the parent educator for the city, sometimes outside speakers are invited. The parents share in the planning, make things needed for the schools, participate in activities and discussions.

The usual daily program for a nursery school is carried on—morning inspection by the teacher; water to drink; outdoor play with teeter-totters, boards, packing boxes, wheel toys, ladders, jungle gyms; indoor play with paints, blocks, clay, tools, books, music, games; midmorning tomato juice; rest before dinner, a well-balanced noon meal planned by a dietitian to include many of the day's requirements; sleep and play again.

Child Care in College Curriculum

"But what has all this to do with home economics?" you ask. In the objectives of the home economics curriculum of Buffalo State Teachers College understanding children is stressed for several reasons. In these days of small families, prospective teachers often lack any experience or contact with little children, yet they are supposed to teach units in child care and be able to help parents with their problems. Their knowledge of human

behavior, if derived wholly from books, may be quite useless when tested in the actual care and management of children.

Little children show us the beginnings and mechanisms of human behavior and problems much more clearly than do adolescents or adults. Students find out many things about themselves, their motives and feelings, their own patterns of behavior and difficulties, when tested by the demands of little children. Last, but not least, students become mothers and homemakers and can use every bit of knowledge, insight, and methods of guiding and caring for children which we can provide for them.

Every Sophomore an Aide

All sophomores in home economics participate for one semester as assistant teachers (not just as observers, and this is a very important difference) for four hours a week in federal or private schools. Each student is assigned to one school and becomes, as far as possible, a real teacher in that school, working under the regular teachers, doing anything she is asked to do, sharing in the routines.

In addition, she attends at least one parent meeting, makes one or more home visits, makes an exchange visit to a school of a different type, stays through the noon hour or visits a school where dinner is served, writes a detailed case study of one child and three papers combining her readings and the application of what she has learned in class with her experiences with the children.

Along with this, she meets in a class two hours a week where subject matter and experiences are shared and interpreted by the entire group. Narrative reports of her work, made out by the nursery school teachers at mid-semester and at the end of the semester, are discussed with her in individual interviews in which evidences of her progress, her interest, the children's responses to her, and her special needs are pointed out. She is also given the ratings on her co-operativeness, willingness to work, and general standing as checked by the nursery school teacher.

Value of Experiences

Many evidences of the value of these experiences have been collected during the four years the experiment has been in progress. One of the most interesting is that it introduces a girl to teaching in an informal, friendly, unsupervised situation in which she may find herself, work through some of her own fears and inhibitions, have the fun of being the teacher in a situation in which she feels more adequate, discover her own deficiencies and try to improve them. Thus, she comes to her regular student teaching feeling more adequate and prepared.

Too, she usually finds that her assets and liabilities as a person show up clearly and she is able to appraise them in the light of the experiences she is having. Many counseling opportunities have been opened up in the interviews about nursery school participation.

The student who "hasn't liked children" discovers their infinite, intriguing possibilities. The student who thinks of children as toys and playthings learns to respect the real individuality and personality of each child.

None of this could happen without the co-operation of the nursery schools and the teachers. Taking inexperienced students each semester, grading them, appraising their progress, letting them take on more responsibilities as soon as they are ready, adds to the work of the teacher. On the other hand, the students bring additional help, ideas, talents, and personalities into the nursery school situation. The students testify unanimously and enthusiastically about the value of the experience; the nursery schools continue to welcome and work with the college and the students. Thus, community organizations such as the housing projects and private schools are serving as training centers for future teachers and parents.

Research in Foods

EDITH H. NASON

Miss Nason, professor of foods and nutrition at Syracuse University, is a newly elected vice-president of the American Home Economics Association. She read this paper on food research on June 22, 1942, at the annual meeting in Boston.

MUCH of the time given to research during the last year has been devoted to improving the methods of drying fruits, vegetables, eggs, and meat and their subsequent storage; to the development of new methods of storage of eggs in the shell at ordinary temperatures; and to the determination of desirable amounts of sugar substitutes to be used in recipes for canning, baking, and other foods. Very little of this research has reached the point of publication.

The investigations presented in this report have been selected because of their immediate application, their general usefulness, and their fundamental importance for future research. Much recent and valuable research in foods has had to be omitted because of lack of time to present it.

Germicidal Value of Sugars, Acids

Of some comfort to all of us who are looking for means of preserving fruits in the absence of sufficient sugar (sucrose) will be the research of Erickson and Fabian (*1*). In this work it was found that of the four most common sugars occurring in foods, levulose (fructose) and dextrose (glucose) were more germicidal to the growth of yeasts and bacteria than were sucrose or lactose.

The potency of these simple sugars is only partly explained by their greater effect on plasmolysis since levulose, of the same molecular weight as dextrose, is a more effective germicide than dextrose. The authors suggest that there must be some relation between the chemical configuration of sugars and their antiseptic value.

It has long been known that acids also act as an antiseptic and so aid in food preservation. This same investigation shows that the anions of the acids as well as the number of hydrogen ions have germicidal value.

Given acid solutions of equal pH value, the germicidal potency of the anions is acetic > citric > lactic. Of the two, acids and sugars, the acids have greater inhibitory value to the growth of yeasts and bacteria.

Relative Sweetness of Sugars

Of practical as well as theoretical value is the study (*2*) of the effect of concentration on the relative sweetness of sugars. Using sucrose solutions as standards, it was found that as the concentration of the sugar solutions was increased, the differences in sweetening power between sucrose and other sugars decreased. Furthermore, the mixing of two sugars may give a sweetness greater than the sum of their respective sweetness.

Glutathione Research

For many years cereal chemists have been endeavoring to find the ingredient or ingredients in whole-wheat flour responsible for the poor volume and texture of whole-wheat bread. Analyses of the germ, bran, and other constituents most abundant in the parts of the flour removed by refining have led to the conclusion that the ingredient most harmful to breadmaking is glutathione, a tripeptide of glutamic acid, cysteine, and glycine (*3*, *4*).

It is a water-soluble substance found in large quantities in the germ of wheat. While its action is not definitely known it is believed that

glutathione shortens the gluten strands and so reduces the elasticity of the bread dough. This results in a more compact loaf of poor volume and texture.

After the discovery of glutathione as the undesirable constituent of whole-wheat flour, the problem became one of finding methods of destroying it without reducing the vitamin potency of the natural product.

Hullett and Stern (*5*) of New Zealand have suggested what appears to be a practical method of overcoming the deleterious effects of glutathione of the wheat germ, which makes possible the addition of wheat germ to white flour and thereby the enrichment of white flour.

The method consists in fermenting wheat germ with yeast from five to seven hours, at the end of which time the glutathione is destroyed. The fermented germ is then added to the flour and other ingredients, after which the dough is made into bread by the ordinary methods. The resultant product has good volume and texture. The color of the crumb, grayish to purple, can be overcome by addition of acid or antioxidants to the fermenting germ. In their experiments germ was added up to 10 per cent of the flour.

Saving Thiamin in Quick Breads

It is of interest to note here that while thiamin is not lost during the baking of yeast bread, quick breads leavened with baking powder having an alkaline residue may lose considerable vitamin B_1 during baking. Fincke and Little (*6*) report a loss of 26 per cent thiamin from germ muffins leavened with baking powder.

Barackman (*7*) reports that the addition of 0.25 per cent calcium acid phosphate to self-rising flour will bring about a greater retention of the vitamin B_1 of enriched flour. Doughs with pH values of 7.1 or less show no more than 15 per cent loss of thiamin during baking. The use of milk in place of water in batters helps to preserve vitamin B_1 in biscuits made from self-rising flour.

Texture Changes in Cooked Vegetables

Structural changes during the cookery of vegetables are of fundamental importance. The woody character of many matured vegetables has long been associated with the lignin content, but recent analyses of lignin (*8*) have shown that with the exception of rhubarb petioles and beet roots, there was no marked increase in lignin with maturity of plant. Turnips, rhubarb, asparagus, spinach, string beans, carrots, and beets were examined.

The chemical, histological, and microchemical studies of two root vegetables, carrots and parsnips, in raw and cooked form by Simpson and Halliday (*9*) help to explain the changes in texture produced by the cooking of vegetables. The loss of protopectin and the increase of pectin during cooking suggest that softening of these vegetables is in part due to the changes in the pectins—the cellular cementing material.

Microchemical studies of the cellulose of the plant cell walls show definite changes in cellulose during cooking. The authors suggest that either the cellulose has become dissociated from other compounds during cooking or has been partially hydrolyzed.

Beef Storage and Palatability

At the University of Michigan (*10*) experiments were undertaken to compare the value of various methods of storage of beef on the palatability of the cooked meat.

Results showed that as the time in ordinary cold storage was increased from 9 to 37 days there was an increase in tenderness as shown by subjective and objective measurements, a loss in moisture, and an increase in aroma and flavor. However, the investigators found slight differences in quality of cooked beef stored at 36°F for 48 hours and that stored the same length of time at 60°F at high humidity and in the presence of ultraviolet rays. Nor did the authors find any significant difference between cooked beef stored 48 hours at 60°F and high humidity in the presence and absence of ultraviolet light.

In the study of the effect of storage with ultraviolet light, meat from the forequarter was tested. Twenty roasts were prepared in each experiment, ten from the right and ten from the left side. The results of these experiments are not in accord with those reported by the Kroger Food Foundation at the Mellon Institute of Research.

Tenderizing Meats

For decades home economists have divided meat cookery into two categories, dry and moist heat—dry heat for tender cuts and moist heat for those less tender. Such classification implies that moisture helps to make meat more tender.

Recent investigations show this to be untrue. In the research of Sylvia Cover (*11*) one of each pair of roasts was cooked on a rack in a ventilated oven held at 90°C and one in water held at the same temperature. Tenderness of the roasts was determined by mechanical tests. The meat cooked in the oven required only one-half to two-thirds as much force to be torn apart as that prepared in hot water. This proves beyond a doubt that the water added in the cookery of the less tender cuts of meat does not play a part in tendering the meat.

Since the meat cooked in the oven required nearly eight times as much time to reach the same internal temperature as that cooked in water, it follows that length of time given to cooking is an important condition in the tendering of the less tender cuts.

The same investigator (*12*) has shown that the addition of metal skewers to roasts of meat decreases the cooking time and as a result, the cooking losses are decreased, but at the same time, the amount of tendering due to cooking is reduced.

Cover believes that the tendering of meat brought about by the change of collagen to gelatin is promoted by holding meat at a temperature of 65° C. The work of Bell and Morgan (*13*) is in accord with that of Cover. In this work the tenderness of meat was measured by the loss of collagen brought about by cooking. The loss of collagen was found to be greater from unskewered than skewered (metal) meat. The unskewered meat took longer to bake.

Monostearate in Cake Batters

Also of interest to consumers is the study of the effect of the addition of glyceryl monostearate to cake batters by Daum, Halliday, and Hinman (*14*). Glyceryl monostearate is one of the substances added to some commercial fats to increase their foaming qualities. In this investigation glyceryl monostearate was added to cake batters made with butter, hydrogenated vegetable oils, modified lards, and margarines made from 100 per cent hydrogenated cottonseed oil.

The most obvious effect of the added monostearate was that of an increase in volume index from 6 to 11 per cent. There was no important difference in texture, flavor, grain, or keeping qualities noted. The volume of the margarine cakes was not improved.

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Artistic Standards and Priorities

The priority situation, due to wartime needs, presents a type of art education that is most vital and that has been needed for many years in this country. It is not metal, silk, wool, nor any other material that gives intrinsic artistic value to the objects produced. Creative design and the way materials are handled give the quality called art.

We can have just as attractive clothes made of cotton or rayon as those made of silk or wool. Metal is scarce for our household needs. But a chair or a stove made of glass can be just as effective as those made of metal when design plays its vital part.

Our lares and penates as well as our clothes have had too many frills and furbelows. Priority, with its simplification of design, will teach them to march in a more tasteful procession.

Shall we thus have monotonous standardization? Who is afraid of that big, bad wolf? Are we not inventive and resourceful?

The headlong work of the artists of today seems to be more strenuous and frequently original to the extent of novelty. This is a period of investigation, revolution, and destruction. New materials and methods invite the artist to create. He cannot resist the temptation to experiment with them. He welcomes the changed materials and methods due to priorities and does not regard them as substitutes.

The lighting experts are doing remarkable work designing with light itself, now that metal lighting fixtures and lamps are not available. The furniture designers are creating interesting furniture with glass and with some of the plastics that are not needed for war projects. They are experimenting with different kinds of woods and producing delightful marquetries for furniture and for interiors.

How shall we ourselves think about artistic standards and priorities? As Donald Nelson has said, "We actually have in our hands the materials out of which a freer, richer, happier world can be made. Let no one imagine that we shall lack the good sense to use these materials properly."—GRACE CORNELL. New York Metropolitan Museum of Art, in Boston, June 21, 1942.

Wartime Textile Adjustments

RUTH O'BRIEN

Miss O'Brien is chief of the division of textiles and clothing in the U. S. Bureau of Home Economics and chairman of the subcommittee on household and garment fabrics of the American Society for Testing Materials. Her paper is based on the talk which she gave at the HEWIB luncheon in Boston on June 22.

HOW did you enjoy your bath this morning in your sterling silver tub? We may be asking just such questions one of these days. A fantastic idea? Perhaps so. But you know, this world is a pretty topsy-turvy place right now, and we may expect almost anything.

A War Production Board order came through not so very long ago, specifying that iron and steel can no longer be used for bathtubs, pie plates, mailboxes, and some 400 other items. And manufacturers have no substitute metals available to them except gold and silver!! So there it is. We may have gold mailboxes and silver bathtubs yet!

Substitutes Good and Bad

We are in for a lot of substitutes—and, no doubt, substitutes for substitutes. In most cases, they will not be so satisfactory as the good old stand-bys. But we can take anything and like it if the "taking" helps put Mr. Hitler and Mr. Jap in their places.

Of course, in the process of hunting for substitutes, there may be some lucky finds. A few of the temporary expedients or the inventions born of necessity may become welcomed permanent fixtures in our lives. Some of us remember that the first World War brought forth an American dyestuff industry now second to none. But, on the other hand, when bricks simply have to be made without straw because the straw is needed for more important things, the bricks are not likely to be a complete success.

The Hosiery Situation

The present plight of the hosiery industry is a case in point. In 1939, almost all of the 43 million dozen pairs of women's full-fashioned hose made in this country were of silk. In 1941, 73 per cent were made of all silk and part silk, and 22 per cent, of all nylon and part nylon. And where are we today? Practically all the full-fashioned hosiery knitting machines that are now in production are working, of necessity, on rayon or cotton.

Silk is of course an ideal fiber for hose. Its strength, its beauty—and especially its elasticity—are all in its favor. That elasticity is what makes for snug-fitting ankles and no stretching out of shape or popping at the knees. Nylon has similar properties and, in addition, resistance to rubs—which helps with that little matter of holes at the heels and toes.

But with no silk imports coming in and practically all the nylon needed for military purposes, these are both out of the picture for the time being. Of cotton, we have aplenty and can raise more. In fact, two years ago Congress interested itself in American-grown cotton as a possible fiber for women's fine hose, and handed the problem to the Bureau of Home Economics. As a result, on that August morning when the silk ban was put into effect, the Bureau had some 200 designs all ready for the manufacturers. There was soon a well-beaten path to our doors.

But the country is seriously limited on spinning machines to make the high-count cotton yarns needed for sheer hosiery and fine (as versus coarse) fabrics. We have always imported the great bulk of our high-count cotton yarns and sheer, fine cotton fabrics. Why? Apparently for no particular reason. Perhaps because the British Empire and France got a head start on us, back in the

early days. And we just left that field to them, busying ourselves with making sewing machines and cash registers and automobiles—and, in cotton textiles, the coarser yarns and fabrics. And now, every cone of fine cotton yarn we can produce on the limited number of suitable spindles which we have, is needed for military fabrics. Only the coarser yarns are available—and American women are still pretty fond of sheer, lightweight hose.

Rayon is also being used in large quantities for military purposes. But the situation is so serious in the hosiery industry that a limited allotment has been made to keep as many of the knitting machines in operation as possible, maintain employment for the hundreds of thousands of workers dependent on this industry, and also provide the women of the country with hose at least somewhat similar in appearance to silk.

Unfortunately, rayon is not nearly so satisfactory for hosiery as is silk. It is more suitable for other garments. For one thing, it loses strength when wet. Thus it is likely to break during that nightly ritual of hose washing and drying. If rayon hose are worn before they are thoroughly dry, or if they become damp from perspiration, breaks may occur. And rayon stretches. And even more disconcerting, it forgets to rebound as silk does. No one realizes these difficulties more than do the hosiery manufacturers. It is all one big headache to them. They are doing the best they can—trying to make rayon hosiery more satisfactory by using various yarn and fabric constructions and trying to strengthen the yarn and increase its elasticity by chemical finishes.

The Wool Problem

Wool is another serious problem. Every scrap of this valuable fiber is needed for our men in the front lines. War is wasteful. Clothes wear out faster in the Army than in civilian life. And clothes are important in a war. Most people realize that there always comes a time in wars when food is as valuable as guns. But few recognize that warm clothes may become as essential as either food or guns. In our own history there was Valley Forge, you know. And last winter, wool was a strong factor in turning the tide of battle for the Russians. Wool won over "ersatz" fiber.

Serviceability Tests

Unfortunately, too few serviceability tests have been made on garments and household articles containing fiber substitutes. We know very little about how long they will wear or how satisfactory they will be.

In some studies made at the Bureau of Home Economics on knit underwear, cotton and rayon union suits of the same design wore an average of 30 and 17 periods, respectively. (They were changed and laundered semiweekly.) Vests wore 43 and 34 periods, respectively.

Also by actual wear tests, we have discovered that a properly reinforced cotton hose, even if made of fine enough yarns to give a sheer effect, will last a nurse an average of 33 days and as long as 58 when worn and laundered each day. Service tests on wool suiting containing various amounts of new wool, reworked wool, and rayon are under way.

Blossoms on the Chemical Tree

But fiber shortages are not the only ones we are meeting in textile manufacture. Do you remember those lessons in organic chemistry with the "chemical tree" outlined on the blackboard? The roots, you will recall, were in coal tar and petroleum. And by building up molecules in one direction, the branches on that side became loaded with dyes.

In another direction, they bore nitrocellulose, nitroglycerine, and similar products whose names, only words to us in the classroom, now spell protection for our lives and for our homes. And in the building of the tree, you will remember the solvents—alcohol, toluene, benzene, xylene, and all the rest—really the sap that made the chemical tree grow.

Well, now it is the munitions side of the tree that must be fed. And the dyes that do

blossom on the other branches must be allotted largely to uniforms, camouflaging, and other military purposes.

These are the days when we are learning the multiple uses and interrelations of things. There's chlorine, for example. We textile people think of chlorine as a bleaching agent—a "whitener" of fabrics. But the other roles it is now playing are far more important: chlorine, the purifier of drinking water; chlorine, the component of so many deadly warfare gases; chlorine, an element in a host of drugs and antiseptics. We should not mind too much that it has left our theater for a time and gone to play its part on other stages where it is needed more.

And so the fabric manufacturer, the dyestuff manufacturer, the laundryowner, and the dry cleaner—in fact, everyone connected with the clothing and textile industry, is having his trials nowadays. And we as consumers must recognize that when we are annoyed at substitutes that are not satisfactory, our ire should be directed at Mr. Jap and Mr. Hitler and not at the manufacturers and retailers who are caught in the circumstances of war—even as you and I. We do not improve the melody by shooting the pianist. We do not improve the fabric by scolding at the harassed producer.

New Industries A-Borning

And, of course, Americans are not taking all these difficulties lying down. To cite a few examples: Efforts are being made to start producing silk in this country. Many acres were planted to flax this spring so as to produce some of our own linen.

The production of synthetic rubber is speeding up—and will eventually, we hope, bring back our elastic yarns, as well as put tires on our cars. Textile fibers from the redwoods and from yuccas are being studied. Fibers from milk casein, from soybeans, and many other sources are making their appearance. And textile mills are working the clock around in a Herculean effort to produce enough for us all.

Consumer's Role

And what is the consumer's role in all this? What of the future for us? Well, some textile people are wondering if the answer will not be a return to simpler, sturdier clothes for the duration—perhaps to more sportswear types, with hose and shoes and everything else in keeping. Surely as we get deeper and deeper into this ghastly maelstrom, more and more of us will have to work harder and harder. We will be concerned, not with the sheerness of our hose, but with their durability; not with the elegance of our dress, but with how well it functions on a war job.

We will be much more interested in fabric quality than formerly. How long will it wear? Is it washable? Will it shrink? Will it fade? These things will mean a lot to us when selections become very limited, when price rises are hidden in lowered quality.

Incidentally, now while they are having to use substitutes, some manufacturers are taking special precautions to protect the reputation they have built up in years past for quality goods. They are advertising and labeling their present output as "duration" merchandise and giving detailed information as to the difference in composition and performance to be expected from it. Thus, informative labeling is on the increase.

Yes, the clouds are black. We might as well admit it. These are difficult times. But new human values are arising. We are taking care of what we have. We are learning to mend and remodel and be thrifty. We are not worrying so much about having clothes that outshine Mrs. Jones's. The frills are disappearing in favor of the practical and the useful. It was in 1776—one of those other fateful, momentous years in American history—that Samuel Johnson made the sage observation, "Fine clothes are good only as they supply the want of other means of procuring respect." By "fine clothes" he was referring to the ostentation and frippery of the court of his time. Well, the Americans of 1776 were not concerned with such. And neither are the right kind of Americans in 1942.

Denver's Nutrition Program

VERA HILLS DAY

Mrs. Day's interest in nutrition dates back to a time when her husband became an invalid because of nutritional deficiencies and when there was a baby son to help develop into husky manhood. She studied child development, foods and nutrition, and adult education at Iowa State College, then spent six years with the Denver Bureau of Public Welfare. Since March 1 she has been on leave from that organization to co-ordinate the city's nutrition program under the Defense Council. She trains the teachers, supervises their work, makes the community contacts.

DOCTORS on draft examining boards are gravely shaking their heads and muttering, "Something must be done about this." In one Alabama city a dozen Negroes in the group handled one morning fail to pass the physical examination. Too much "corn pone and fat pork" is the conclusion. Up in Montana the son of a middle-class family doesn't pass, either. His buxom mother declares, "I just can't understand it. I cook and bake all the time for that boy and his Dad."

When facts and figures of our first draft registration were compiled, there stood the bald truth. Forty per cent of the draftees were disqualified because of physical defects, and more than half of these were considered to be caused by nutritional deficiencies.

Launching the Project

In Denver something has been done about "this trouble." On July 3, 1941, Mayor Stapleton issued the following statement:

> Recognizing the importance of strengthening our home defense and the need of strengthening democracy in our local communities, I, as Mayor, have appointed a citizen's committee to facilitate the prompt performance of this community's responsibilities in the field of Health, Welfare, Education, Recreation, and Related Activities as they may arise, and to deal with such problems as they present themselves during the present crisis.

The Mayor appointed as president of the Denver Defense Council V. L. Board, formerly vice-president and general manager of the Public Service Company. The Mayor also appointed chairmen of the following committees: civic and civilian protection, defense savings bonds and stamps, public health, public information and civilian training, housing, recreation, education, and family security.

Bernice Reed, director of the Denver Bureau of Public Welfare, accepted chairmanship of the family security committee. Under this committee there are three subcommittees: family welfare, consumer buying, and nutrition. Miss Reed has long been active in spreading nutritional information to clients of the Bureau and realizes that this type of program must reach not only the underprivileged and low-income groups but also every other family.

Dr. John W. Amesse, a well-known pediatrician, agreed to head the subcommittee on nutrition. It was natural to turn to Mrs. Kate W. Kinyon, director of home economics in the Denver Public Schools, for guidance. Her enthusiasm as co-chairman of the nutrition subcommittee has helped to carry the program into the public schools.

During the first two meetings of the subcommittee on nutrition there was much discussion as to whether Denver should extend its hot school lunch program so as to serve every child, or whether all effort should be concentrated on an educational program designed to teach adults, especially those responsible for the care and feeding of children.

Already 3,385 Denver children in 37 schools were being served these hot lunches. The committee recognized the value of that project but finally decided that such a program alone would not correct bad feeding practices in the home. In order to secure lasting results, any program to correct nutritional deficiencies would have to reach all adults, especially the homemakers.

Co-operating Agencies

Denver's program is a community project with many agencies co-operating. Charles E. Greene, superintendent of public schools, and members of the board of education gladly give the use of school buildings and laboratories for classes and demonstrations. The Surplus Marketing Administration furnishes blue food stamps, and certain interested individuals give cash or other foods so that cooking demonstrations can be given.

The Denver Public Library has obtained books and pamphlets on all phases of nutrition for both its main center and its branches. In addition, Doris Wells of its staff has compiled a bibliography of books, documents, pamphlets, and magazine articles about nutrition for the use of teachers, dietitians, and home economists and has assembled popular articles on the feeding of children, vitamins, food buying, and nutrition.

The Denver Bureau of Public Welfare is helping prepare a small pamphlet which will circulate up-to-date information concerning nutrition. This pamphlet will contain household hints, nutrition news, suggested menus, recipes, and buying tips and will be distributed monthly to more than 30,000 school children.

The American Women's Voluntary Services are helping to organize nutrition classes in community centers, churches, parochial schools, and other community units. Also, they are helping to recruit volunteer teachers, many of whom are being certified by the American Red Cross.

The Work Projects Administration is furnishing nutrition teachers and helping organize classes.

Teaching Personnel

Dietitians of the community are not only leading discussion groups but are also locating other volunteer teachers.

Three members of the home economics department of the Emily Griffith Opportunity School (Mrs. Bessie Hawthorne, Mrs. Ila Mae Hobson, and Mrs. Mildred Kays) are now giving their full time to a Food-for-Victory program.

Charline White, a young Negro home economist, is promoting an excellent program among her own people. Of the 10,000 Negroes in Denver more than half live in an area covered by 65 city blocks. Here Miss White is conducting community classes in the Episcopal Church of the Redeemer, in the Phyllis Wheatley Branch of the YWCA, and in the Negro Woman's Club. She hopes soon to begin classes in the Negro housing project. The whole Negro community is diligently aiding Miss White because, as one of them said, "This program is a necessity for us!"

Homemakers who are former students and teachers of home economics have volunteered their services as teachers. Some have never taught; some have not taught for years; but with their experience as successful homemakers they are making a valuable contribution to the nutrition program.

Teacher Standards

No program can be successful without definite and high standards for teacher selection and teaching skills. A standards and qualifications committee appointed by the Denver Defense Council agreed that teachers must meet the following minimum standards for teaching nutrition:

1. Two years' college training in home economics with emphasis on nutrition, or the equivalent; and
2. Two years' practical experience in any one of the following: teaching, institutional management, dietetics, or homemaking; or a combination of the above; and
3. A twenty- to thirty-hour teacher-training

course in adult education or its equivalent. Successful experienced teachers of adults already on the job or those who have completed courses in methods of adult education within the last three years may be considered qualified.

Subject-Matter Standards

A natural sequence to setting standards of qualifications for teachers was standardization of what is taught. After consultation with teachers of adult groups and homemakers themselves, a course of ten lessons was set up, each lesson two hours long, to cover the following topics: why special emphasis should be placed on nutrition at this time; the meaning of an adequate diet; meal planning for adequate nutrition; vitamins and minerals in the diet; cooking to conserve vitamins and minerals; protein foods in the diet and the principles underlying their cookery; carbohydrate foods in the diet and their cookery; extender dishes; more nutrition for your money; substitutes, vitamin pills, enriched foods; irradiated and homogenized milk; mealtime is a happy time.

It seemed important to emphasize mealtime as a happy time. Otherwise emotional conflicts might block the success of the whole nutrition program and cause no end of disturbance in the homemakers' families. If Junior doesn't eat, why not? What can the homemaker do to overcome this difficulty? Can she serve food in a different, perhaps more attractive way? Has Father's chance remark caused Junior to refuse the food?

These questions are carefully considered and decided so that all can "eat nutrition" as one little girl remarked and still be happy and congenial. This course of study based on the practical needs of homemakers represents a fundamental introduction to nutrition.

Co-ordinator Appointed

The program in Denver became so large that a co-ordinator was needed to organize classes, to see that qualified teachers were assigned to the groups, to supervise, and to perform any other service which would promote a unified program of nutrition. Because Mrs. Vera Hills Day had worked so closely with Mrs. Kinyon in starting the program and because she is a home economist, she was appointed to the position of co-ordinator on March 1. Miss Reed was happy to give Mrs. Day a leave of absence from her duties at the Denver Bureau of Public Welfare.

Growth of Work

In the beginning only three experimental classes were started. Soon the demand from the community became so great that other classes were organized. On June 1, 3,500 women were being taught in 111 classes. Seven new classes composed of 30 women each began June 15, and requests for other classes are being received.

Approximately 10,000 women have been reached not only by classes but by speakers, consultant service, and nutrition displays. When the Garden Clubs of Denver recently finished their course of lessons on gardening, they asked three nutrition teachers to talk to them on nutrition and the conservation of food. Churches, schools, and Legion Auxiliaries have asked for other talks on nutrition.

A school requested a nutrition display at its PTA Open Night. When the Consumer Information Center was started in Denver, the co-ordinator was invited to be a member of its committee on publicity. Also, the Center requested that a nutrition consultant be on duty there each day, five days a week, and that a nutrition display be exhibited each day and changed every two weeks. The Visiting Nurse's Association is using a nutrition consultant one day a week for its staff and other nutritionists in its well-baby clinics.

Mrs. Average Housewife, Mrs. Big Executive's Wife, and the Section Hand's Wife—all are eager to buy, cook, and serve the right foods to build strong bodies. Denver's community program is helping them to know how to feed their families for maximum health!

The Farm Homemaker Faces War

MARY CUNNINGHAM BAUR

After her graduation from Iowa State College, Mrs. Baur went to the Merrill-Palmer School two years on a scholarship and was a teacher of homemaking. Though she is a busy farmer's wife and has two sons, she finds time to serve on the county nutrition council, to do other community work, to write magazine articles on child training, to attend state home economics association meetings and conferences on child welfare.

THE farm homemaker is not only a wife and mother; she is a business partner of her husband as well. Her job extends from giving small fry cod-liver oil to warming pigs in blankets, from leading county nutrition councils to following Congressional action in Washington.

Now after ten months of an America at war I find that the headline problems of this farm homemaker and her husband are: all-out production of food; farm labor and machinery; transportation; family health and happiness; education.

All-Out Food Production

All-out production means achieving the goals set by Secretary Wickard so that men in uniform, neighbors in America, and friends across the sea will be well fed.

On our farm it means better planning and increased effort. It means spending night watches with mother and baby animals. It means being an obstetrician in the stock barns and a dietitian in the feed lots. It means working earlier and later in the field. It means praying for rain for the corn and praying for sunshine for the hay. It means patrol duty against erosion, chinch bugs, and grasshoppers. It means guarding against "necro," cholera, and Bang's disease.

Machinery and Labor

We treat our machinery like priceless jewels—painstakingly oiling it, greasing and repairing it. Even run-about Denny, aged four, wields a grease gun pretty effectively!

My husband has a shop where he builds and repairs with hammer, forge, and drill. Jobs requiring high pressure he takes to the village smithy, who is now a modern hero as well as a legendary one.

Mechanized farm equipment is a must for high production.

Today finding a large tractor for sale is like discovering Captain Kidd's treasure. Last spring farmers from northern Iowa drove south and southern farmers trekked north on treasure hunts to find large tractors on rubber before the all-steel-wheel models took the field. My husband and my mother discovered that each was planning to buy the same tractor from a dealer thirty miles away! We wanted two new tractors so that we could continue wartime operation of the farm with a minimum of help. The old tractors probably would not last the duration, and repair parts for them would be long in coming, if at all.

In May we needed barbed wire with which to repair fences. A call to the local lumber yard located none, and dealers in near-by counties all answered, "We don't have any barbed wire. Don't know anyone who has any." So we will have patched fences. Fencing of all kinds is a big item here because we live on rolling land, and rains do a neat job of making escape gaps for the pigs.

Except in defense plant areas, a real bottleneck in Iowa farm labor is not expected until 1943. By then more service stars will hang in the windows of farm homes, and more hired men who have not been drafted will have obtained employment in armament plants.

All summer we were uneasy for fear that one of our four regulars would "pull out"

during grain harvesting or haymaking. They are not so efficient as former help, but they have stood by. Now we'll worry about getting the silos filled, the corn out, and the stock wintered.

To ease the labor situation last spring high schools dismissed the students a week early, boy scouts were trained, and more homemakers donned overalls. My sister, a college lass, jumped at the chance to drive their tractor for the haying gang. Was she proud of her shirt-and-shorts sun-tan! I felt pretty close to the pearly gates the first time I mounted the tractor, but because the help stayed I was not called on for many such jobs.

It takes training *on the job* to develop good farm help. A cousin reports that some new-to-the-farm city lads threw eggs at the prize bull and picked up baby pigs to annoy the mother sows.

In our community five neighbors—three owners, two renters—have pooled their labor and equipment to attain efficient wartime production on their farms. Individual operation had been made difficult by loss of labor, scarcity of equipment, and financial encumbrance. Their farms range in size from 98 to 484 acres, with a total of 1435 acres. They have two tractors. One man who last year plowed his North River bottom with a walking plow said, "The use of a tractor for one day will accomplish more than I could do in fifteen."

Transportation

Perhaps no other single factor could send us back to horse and buggy days as quickly as the absence of new tires. The sad part is that we are finding that the horse and all his trappings are not available any more.

We cannot accomplish anything without some traveling—we are 4 miles from the north place, 3½ miles from the east place, 9 miles from a railroad station, 25 miles from the hog market.

With a shortage of trucks and truck drivers the little pig may have to walk to market. Our cream is still picked up twice a week, but the egg man comes no more. We'll buy more corn and oats for feed from the elevators, if they can deliver, than from Farmer Brown's crib.

My husband is acutely concerned about repair emergencies. He says that where there used to be one part to replace in the olden days there are five hundred in this mechanized age. When breakdowns occur, getting the repair parts and getting started again within two or three hours may mean saving the crop. Mail-order delivery of the parts would take two or three days at least. Even when we go after parts, shopping around is sometimes necessary before the one desired can be found.

Health—Vitamins—Victuals

Routine vaccinations for children and periodic physical examinations for each family member are health safeguards needed at all times but especially during wartime. A year ago free smallpox and diphtheria immunizations were given to the children in our county.

This year the county nutrition council by their educational program hopes to effect prevention of dental caries in children through improved diets and early care of teeth which have already decayed.

Here on the farm where tetanus lies in wait, our family has taken tetanus toxoid shots. Since we live thirteen miles from a doctor, our first-aid shelf is kept in constant readiness. Emergencies such as the toddler tasting Daddy's "sour" creosote liquid require immediate home treatment and quick trips to the family doctor.

And we hope our doctors last. Two of the eight doctors in the county have gone to care for the boys in blue. One of our town's stand-bys has been rejected by both Army and Navy because of his physical condition, but a younger and stouter one will go as soon as he finds an effective nine-day diet! When at long last my husband decided to consult a city specialist we found that this doctor would be "out" for the duration.

In an adjoining county one woman doctor is left to serve the 2,000 town population plus the surrounding farm families.

To serve attractive, nutritionally-adequate meals is a day-to-day challenge to any farm homemaker. Husbands who use up much energy need meals that stick to the ribs. And the homemakers need a host of suggestions for short orders, dishes that can travel to the fields, and meals that don't mind waiting.

During rush seasons my husband often buzzes in around eleven o'clock with, "How soon can I eat?" The next day he may appear at two o'clock with his query, "What have you got to eat?" At first it was disconcerting to find that rain, weeds, and snow bow to no cook. But I've learned to keep "quickies" on hand and to stuff deflated baked potatoes.

A big victory garden, I find, will not materialize simply through desire. Six-year-old Jack and I planted our first rows Easter Saturday, but the rain did not come. Neither did the peas. After three replantings had left me short, I was most happy to be a member of a township food exchange through which I could get more supplies.

Under the direction of the county AAA fieldwoman our 16 townships were divided into quarters with a telephone vice-chairman for each. Whoever had a garden surplus or deficit telephoned the chairman. In this manner those who were in want were brought in touch with those who had a surplus. In a near-by county, FSA homemakers have worked out a similar exchange.

This summer no longer were 40 per cent of Iowa's farmers failing to raise enough garden produce for their own table. The home demonstration agent reports that the ten or twelve families in our county who did not have a garden in 1941 planted one this year. She also says that there has been a general increase in the varieties of vegetables planted and in the acreage put in.

Vegetables and fruits were canned in greatly increased amounts. Besides canning more, I "lockerized" the fruits and vegetables that were "right" when we made trips to town. And this fall I plan to store more carrots, onions, turnips, squash, and apples and to wrap the green tomatoes before the first frost. In canning fruits I had to try new recipes; it was a comfort to have home economics recommendations out in time to use them for early rhubarb and strawberries.

Since there are fewer trips to town (13 miles away) grocery lists are longer and better planned. Thanks be! The high line (rural electrification to some of you!) came by our farm three years ago, with the result that now in the winter we can keep shipped-in vegetables fresh for several days and can bring out from the locker a two-week supply of meat (lamb, pork, beef, or broilers) on the same day that we market eggs or sell hogs and calves at the community sale barn. However, this winter I'll go back to some home canning and curing of meat.

Like garden produce, egg production has increased, too. We placed our order for 500 chicks early in February but couldn't get delivery on the desired cross until the middle of May, two months later than we had hoped for. So busy were the hatcheries.

Last year when the government called for more eggs we decided to try keeping over 100 hens, a year old. We housed them in an unused hog house about 400 yards from the house. Because their quarters were cold and because we could give them little time and attention they never—well, hardly ever—laid over twenty eggs a day and probably averaged less than ten. Disgraceful! Uncle Sam and US and Co. both lost out.

This fall the handy man will remodel a storage shed adjoining one of the pullet houses —for another 100 hens. I hope to gather eggs three times a day instead of two. If I save two eggs a day from chilling and breaking, in a year's time that would mean approximately 61 dozen more eggs to smash at Hitler.

Hot school lunches have been a boon to rural families. Last year 67 out of the 86 rural schools in the county subscribed to the then new program. Teachers reported happier children, improved grades, and increases

in weight. One teacher wrote that without the lunch some children would have had only popcorn and cold pancakes to eat—and *that* in the richest agricultural state in the world.

To supplement the commodities, this summer we mothers of Jefferson Center children canned extra jars of chicken, soup, and vegetables.

Family Together-ness

"The more we are together" may come to mean happier times for farm families. The staying-at-home adjustments for Dad, Mother, adolescents, and small children will be a bit difficult but inescapable. Tires!

It is up to the homemaker to ease this adjustment—to make home a more attractive place, to make rooms more livable and comfy on the proverbial shoestring, to provide a variety of interesting work and play opportunities, and to give security to family living.

We are all looking to professional people for help in doing these things and for inspiration in preserving family morale.

Last summer with my family I learned interesting things about our farm and neighborhood, walked in the timber with the children, lunched in the shade of the old apple tree, picked bugs off the potato vines and had fun doing it.

Our large kitchen bulletin board displays maps, funny cartoons, apt sayings, pictures of trees, flowers, and vegetables, of airplanes and ships, and crayon sketches of everything under the sun.

Curtailment of "outside activities" in high school leaves adolescents lost and parents troubled. A farm mother says, "We can't possibly make those extra trips. What will Joanne do without her dramatic work, and what about Paul and basketball practice?" The superintendent of our county-seat high school wonders if his 185 rural students—half of the total enrollment—can find transportation this fall. Some now drive 10, 15, and 20 miles to and from school.

A spring survey showed that more farm pupils planned to board in town and that tires on some jalopies probably would last another year.

There is no shortage of rural teachers this year. By June 1 all except ten of our schools had teachers and the county superintendent expected those vacancies to be filled by married women whose husbands had been drafted. However, the high school had a time getting a male vocal instructor, and the state office reported that they expected a shortage of high school home economics, manual training, and mathematics teachers.

Because of the type of farming done here—livestock and grain farming—school terms have not been cut short. But some schools plan to open a week early this fall so that school can be out early enough next spring to free boys for ground preparation, corn and soybean planting. Too, there probably will be an increased number of schools having a week of corn-husking vacation.

Community Services

The type of service that a farm housewife can give depends on her training, her experience, her distance from the place where service is needed, and above all else on her home responsibilities.

In peacetime it is the wise homemaker who knows when to say "no" to the outside demands on her time and energy. In our neighborhood a mother of four young sons—the oldest eight—can't possibly take an active part in the organizations outside her home. There are others like her, and they deserve blue-ribbon recognition for staying on the home front.

In wartime the farm homemaker's home jobs are multiplied and her service responsibilities are increased. Our county nutrition chairman is a farm woman, the mother of six children—youngest 11 years. In addition to managing her farm she shares her home economics training with her community.

Agencies serving the farm homemaker should take into consideration the fact that she has little time on her hands. We welcomed wartime curtailment of all-day meet-

ings, and we are really using the new brief but complete charts and leaflets published by the Extension Service.

The afternoon canning demonstrations last spring by our home demonstration agent were excellent. Dinner dishes could be washed before we left home, and we were back in time for chicken chores. The meetings were open to the public, but whoever could not attend was later reached by the four-square-mile educational co-operators.

The Exigencies of War

Sugar is no longer a 100-pound grocery item. More farmers are raising cane. And bees are as precious to us as they were to Pooh.

Without a doubt there is a real bottleneck in household help. An ad we ran in the state paper brought only one answer and that a fizzle. Young girls from our county are working in defense plants, and others are getting NYA training for defense jobs.

Last spring with promises of canned chicken and strawberries I coaxed a woman to come out from town for ten days. She was a housecleaning lifesaver. And I certainly tried to make her feel that she was making a definite contribution to civilian morale by darning socks, patching holes, and covering with outing flannel old pieces of wool blankets.

In the absence of steady help I often leave "dust under the rug" so that I can think up problems for the six-year-old mathematician or can fix a train when the four-year-old calls, "Mama, I need some string. I need you too."

More than most anything else in the clothing line I'll miss zipper coveralls. They were a joy for both mother and children. The last pair I found cost $1 instead of the former 69 cents. To save ironing, the boys wore seersucker sun-suits. Ones for mud-puddle days and water fights were made from old kitchen curtains that before the war had been detailed to the rag-rug sack. Here's hoping that the war brings further steps in the standardization of sizes. It's defeating to find a size four from one store too large and one from another store too small.

There'll be no more trips to town for afternoon bridge or for federated club meetings. And with neighbors two and three miles distant, diversion will have to be found in radio programs, books, and magazines. But now that we are working to preserve our way of life, I think the grindstone will not be so rough on the nose.

I know that my home needs me and that my country needs the food that overalls produce. A job *sans* glamour but a vital one which the farm homemaker has been asked to do.

Assignment for Teachers

The home economics teachers have a large and important wartime assignment. Though our total food output is the largest on record, the need for our food to supply our fighting men, abroad and at home, and our allies is record-breaking also. The civilian population at home must govern its eating by the needs of those at the fronts. That means that we won't have everything we have been accustomed to.

No other group can do more than the home economics teachers of the country to help American households adjust their meals to war. You can bring about the substitution of plentiful cheese and dry beans and poultry for the beef and pork that must go to soldiers and sailors. You can let millions of families know the urgency of eating fresh fruits and vegetables instead of canned so as to conserve tin and supply our troops and allies. You have dozens of such educational jobs cut out for you.—CLAUDE WICKARD, Secretary of Agriculture, National Institute on Education and the War, August 28, 1942.

Of People and Paint

SOPHIE S. McFARLAND

Mrs. Sophie S. McFarland is an area home management supervisor in the Farm Security Administration, and from her office in Berkeley, California, helps direct work in Nevada and northern California. She has been in FSA work since February 1936.

ALL of us know the lift that comes from a new hat. We've all had the experience of doing a better job because we knew we looked right. We've seen how a newly painted room will spur a person on to clean windows and curtains, to fix furniture. How paint on the outside of a house gives pride in ownership and helps a family take its rightful place in the community.

Setting Up the Associations

In the summer of 1941 the home management supervisors of the Farm Security Administration in northern California started to develop Home Improvement Associations in their counties. The chief objective of each association at the time of organization was the purchase of a spray paint machine.

Supervisors had long observed the need for paint on the houses of their clients. They felt that if the houses could be painted other desirable results would follow.

In order to make the spray paint machine not only possible but also available to the greatest number, the supervisors decided to suggest to the farmers and their wives that small groups form into associations for co-operative ownership of a machine. Since the cost of the equipment was about $60, a membership of about twenty-five families could probably finance its purchase. Each family was to pay a membership fee of twenty-five cents plus $2.75 for purchase of the equipment. Surplus money accumulated from members taken in later could either be used to purchase additional equipment or for dividends to be declared for the members.

One of the first meetings to discuss the formation of an association was held in August 1941 and was attended by nearly 200 people. They watched a moving picture illustrating the progress of agriculture in that particular area, then discussed the purchase of the spray paint outfit which was on display.

One woman declared that for 20 years she had wanted to have her house painted and this was the first time she had seen any possibility of having it done. Before the evening was over enough persons had signed up to make it possible to organize an association.

The Officers

This organization, and the others formed later, drew up by-laws and elected officers (usually a chairman, a secretary-treasurer, and a custodian). The home supervisors wanted each organization to function with as little help as possible from them.

The custodian was a person of great importance in the organization, since he scheduled the machine for use, saw that the schedule was followed, and that the machine was properly cleaned and not kept too long a time by any one person. The custodian chosen was nearly always a man used to taking care of machinery and actively interested in the association.

The home supervisors were greatly helped by the co-operative specialists in their territories. Whenever requested, these men donned overalls and painters' caps and demonstrated how the machine would work and what the results would be. Much of the credit for successful operation goes to them.

Progress by June

By June 1942 fourteen associations totaling 237 members had been organized in northern

California. In some instances these groups had worked together in the mattress-making program the previous summer and thereby had found out how much they could accomplish by working together. Two of the groups are planning other co-operative purchases, such as canning supplies and muslin cloth and an extension cord needed in their painting work.

Because the rainy season in California lasts from early November until March, it was impossible to do much painting before spring. However by June 37 houses, 2 milk houses, 2 large farm buildings, 3 tank houses, 1 barn roof, 59 rooms, and 47 pieces of furniture had been painted. Many of the houses were very old and had never before had any paint. Oil paint is, of course, most satisfactory for the exterior, but its price was in some cases prohibitive so that many of the houses were painted with a cold-water paint. Rooms also were done with cold-water paint, which had excellent covering qualities. All the furniture was painted with enamel.

One or two meetings were needed in each group to discuss paint, its selection and combination, the care and use of equipment, and the preparation necessary before the house was painted. The home supervisors pointed out that fungus, moss, cobwebs, and dirt should be brushed off carefully and scaly paint scraped off before the new coat is applied. They urged families to repair porches, steps, screens, and doors before painting the houses.

By-Products

These families have gained much from the painting of the houses and interiors. They have pride in their own accomplishments and are spurred on to other improvements. They have learned that their homes can be made more livable if they will but make the effort. After the painting they planted flowers and showed a definite trend toward orderliness.

Some of the Home Improvement Associations added consumer education to the organization's program. Others have had discussion groups concerned with the trim on houses and how to fix roofs and mend porches.

The Home Improvement Association has helped draw women together in monthly social meetings, an important development since their social lives have been cramped. One group had a white elephant swap of shoes and clothes, pots and pans, and then an exchange of plants and shrubs.

We have also distributed to the members of the groups printed material about furniture repair and upholstering and care of floors and floor refinishing. Clean walls have directed attention to dingy floors and furniture and have led to the reconditioning of both.

Case Histories

One family, whose house had not been painted for eighteen years, was thrilled to be able to put on paint. They chose a gray color, but when it was on they regretted not having used white and said they would have to do the house over again. After all the years without it, paint had suddenly become important. The man of the house bought his first new suit in twelve years, just one week after the house was painted.

Members of another family, who thought they could not afford to invest in paint, joined the paint spray co-operative and, after they had had the one-room demonstration at their home, became so enthusiastic over the improved appearance of this room that they have since repainted two other rooms and finally the outside of the house. They have planted foundation shrubbery and are contemplating a lawn, a pen for the chickens, and a hedge to hide the farm barnyard from view of the house.

The Future

As this is written, summer has come again to California and spray paint machines are being scheduled for their rounds as farm work permits. It is our hope that between now and fall many more homes will be improved in appearance, many more families will feel the satisfaction that comes from knowing how to do and from doing the things that make for greater comfort and happiness.

Institution Equipment in Wartime

MABELLE S. EHLERS

Mrs. Ehlers is head of the institution department at Michigan State College. In 1934–35 she was chairman of the AHEA department of home economics in institution administration. Her wide experience in the field includes work in a commercial tearoom, a residential hotel, a dormitory, a camp, a college cafeteria and commons, and in a public school cafeteria in Gary (Indiana) and one in Chicago. This article is from her talk given at the AHEA convention in Boston, June 22, 1942.

If one is asked what institution equipment is available at present, there is considerable likelihood that the answer will be "nothing." Which is not quite true, of course, but near enough the truth to make some of us feel a bit uncomfortable.

Unless you have a priority number, there are things that cannot be obtained and, for many things, that priority number must be a high one. A priority number merely gives you a preferred place in the queue waiting for equipment. If the pieces give out before your turn comes, then you are out of luck. Heavy kitchen equipment is practically unobtainable no matter what your priority number may be.

Lifetime of Equipment Unknown

How long this will last, no one can say. Neither do we know how long our equipment will last. Commercial operators have been saying for a long time that the life expectation of heavy-duty equipment in their situations was ten years. Dormitory, school cafeteria, and other noncommercial operators usually said that they didn't know what the life of their equipment was but that it should last for more than ten years since it didn't receive so hard wear as commercial installations. They did expect it to wear out and be replaced eventually, however.

They were doubtless encouraged in this expectation by the people who had equipment to sell and were always bringing out newer and better models which made them dissatisfied with the old ones. Now, it appears that much of it would have lasted longer if managers had been content to make it do so.

At a recent meeting of equipment manufacturers, one man, in a burst of frankness, said, "Let's stop kidding ourselves. How many pieces of equipment have you ever seen that were completely worn out? We might as well admit that practically any piece can be repaired and kept running."

That outburst of his is encouraging to us who may be worrying about whether this or that piece is going to break down.

Our Job: To Conserve

Our chief job, then, in regard to equipment, is to keep it running. That becomes a matter of repair when needed, not six months after the need is first manifest, but at once. Knives can be sharpened, handles can be replaced, and screws can be tightened even if we do have a war on our hands.

Probably the first thing that we need to do is to inspect all of our equipment and discover the minor ailments that can be corrected immediately, thus producing better work, avoiding loss of time, perhaps preventing more serious trouble of a nature that could not be remedied.

Perhaps the next procedure for a woman operator is to learn from her maintenance man, if she has one, just as much as she can about signs of trouble and what to do about them. Your maintenance man may be called to war, and it would be well to learn all you can from him while you still have the opportunity.

Perhaps the utility companies in your locality are still sending an employee to check your electric or gas pieces at stated times, once a month or so. Usually a charge is made by the month for such service. The work will usually consist of the cleaning of flues, the adjusting of thermostats, the removal of carbon, and the replacement of worn parts.

Possibly more important than repairs is the matter of cleanliness. All pieces of equipment should be cleaned after every using. If water is used in the cleaning process, that should be followed by thorough drying. This is especially important for steam tables, dishwashing machines, clean- and soiled-dish tables, and the like.

If you happen to have some of the new silver that is plated on low-carbon steel, the manufacturers' directions for care will stress the importance of drying after washing and of not letting the silver stand in any liquid or in a moist place, as this material is particularly prone to rusting.

Remove Lime, Prevent Rust

Lime should be removed from anything which it collects on, such as dishwashing machines, steam-table interiors, and coffee urns.

Carbon should be removed wherever found. It will insulate your oven, and the oven will not bake properly. It will clog up your deep-fat fryers so that they will not function properly.

Rust should be cleaned off. Paint should be applied wherever it can be to prevent rusting. Steamers and galvanized pipe stand legs can be painted. So can framework of all kinds, whether it is galvanized iron, cast iron, angle iron, or whatnot. There is a water-repellent material which can be mixed with paint for the interior as well as the exterior of steamers, the application of which will undoubtedly prolong the life of such pieces.

Apply Oil

Moving parts must be lubricated if they are to be prevented from wearing out from friction. Look for oil holes and grease cups. If you cannot find them, it is a good idea to oil everything that moves. Your maintenance man will know where the machines should be oiled, and he can show you, if you still have him.

If he has gone to war or to a war industry, then communicate with the manufacturer. If salesmen are still calling on you perhaps they can show you how to oil the machines. Oil will also prevent rust; consequently, if pieces that cannot be painted show rusting, apply salt-free oil.

Prevent Losses

Besides prolonging the life of equipment by proper maintenance and operation, it is important to reduce losses by theft, by breakage, and by carelessness. While china and glass are still available, some patterns in china are not available due to color shortages. Silver is one item which we lose by theft and also such small pieces as ash trays, salt and pepper shakers, and the like. It should be said in this connection that customer thieving is more difficult to deal with than employee thieving and perhaps more prevalent.

Small items are often lost in the garbage. Unless you have some method of examining the garbage, you do not know how many paring knives, butter chips, and pieces of flat silverware go out in it and never return.

Arouse Employee Interest

The preceding suggestions for prolonging the life of equipment probably sound like extra work at a time when the operators face a labor shortage. But eliciting the interest of the employee is one way of providing this extra care. Employees are anxious to know what they can do to assist in the war effort and if they can be shown that proper care of equipment to keep it functioning is one way to help, they will usually respond.

Efficient, well-trained operators teach their employees to operate machines correctly and inspect to see that they follow their instructions.

Rolling Cafeterias

One development in food service equipment that has been fostered by war conditions is the movable service wagon which has been expanded until we now have the huge so-called "rolling cafeterias." Some of them are so large that they weigh as much as a ton when loaded and ready for hauling by tractor to designated spots in war production plants where the men are served.

The units serve 250 men. The hot food compartment is insulated with rock wool; the mechanically refrigerated cold section with cork. A full meal with several choices can be served from one of these units. It is possible to serve soup, two meats, potatoes, and two other vegetables, two salads, several desserts, and several beverages.

These rolling cafeterias may have their place after the war. Smaller editions may be useful for service in gymnasiums, auditoriums, and other such places where we are frequently obliged to serve food with no equipment available in the place.

Summary

For a short recapitulation, let me say again that to keep our equipment operating we must repair it; we must be generous with paint, oil, and grease; we must operate it correctly; we must prevent losses, keep it clean, and keep it dry.

Times Out-of-Joint

We say times were never so out-of-joint. Human effort and achievement never counted for so little. Our security, our very way of life is threatened and even in peace we have little hope of ever seeing our standard of living returned to us.

My ancestors came to this country over 300 years ago because their way of life was threatened. Most of you stem from stock who came for the same reason no matter when they came. They wanted something for those who came after them which was so precious that they were willing to die far from home, family, friends, physicians, to give up houses, clothes, furniture for something which mattered a great deal more.

Shall we stand here in their footprints and whine because automobiles, gas, fuel oil, silk, wool, and leather are to be curtailed for a while?

These very shores cry shame on us for a parcel of weak, spoiled children bred of times which were good for no man, while they denied security to the majority of men.

We must all be willing as our forefathers were to deny ourselves and follow first principles; yes, willing to give up our much vaunted but actually nonexistent security, even life itself unflinchingly in order that new and better things may come after us if not in our time.

What does it matter if in trying to do what I think is good I make a mistake or if I personally suffer?

We must be less afraid for our security, for our prestige, for our infallibility than we are of being ineffective. It doesn't matter that we suffer; it does matter that having taken up space on this planet, used up its natural resources we have given in return nothing constructive which really matters.—Remarks by LILLIAN LOCKE, Columbia University, at the clothing and textiles morning session, June 23, 1942, in Boston.

Co-operative Research in Nutrition[1]

P. MABEL NELSON

Since 1926 Dr. Nelson has been head of the foods and nutrition department at Iowa State College, where the idea of co-operative research on the nutritional status of college women was initiated. She has served as chairman of the north central states co-operative project since its inception in 1935. Two papers from the project—on the calcium, nitrogen, and phosphorus metabolism of college women—were awarded the 1942 Borden award.[2]

TEN women met last April 26 and 27 at the University of Nebraska for the annual conference on nutrition research on which they had co-operated for seven years. They represented five different colleges and universities in five different states.

They agreed to continue their co-operative research and to put special emphasis on publication of accumulated data, all of which provide pertinent material for use in the present emergency. By last April, 16 papers either had appeared or were in press, and many more were in the process of being written.

Setting Up the Project

The techniques for organizing co-operative research were carefully outlined in 1925 by Thomas P. Cooper and presented by him that year at the annual convention of the Association of Land-Grant Colleges and Universities. Ten years later the co-operative nutrition project was originated by the nutrition subsection of the Iowa Agricultural Experiment Station. Since then several other co-operative projects in home economics have been set up.

This nutrition project was organized to determine the nutritional status of college women. At the first conference the research workers decided to approach the problem from five different angles. They would collect anthropometric data as to stature and build of college women, using those measurements which were considered clues to nutritional status. They would carry on basal metabolism studies of selected college women, with at least one determination for each woman throughout each of the four years of her college course. They would explore the food habits of college women in various living situations. They would study some of the formed elements of the blood; and they would investigate mineral balances, particularly those of calcium and phosphorus on freely selected as well as on controlled food intakes.

The first problem confronting the group was the development of uniform techniques. For example, how long should a human balance unit be, in order to insure dependable results? Does a five-day study with week ends omitted afford a truer picture than one including them?

Then as a preliminary step in the study of the formed elements of the blood, an evaluation of oxalate solutions for the determination of packed cell volume in human blood was made. Much time was spent in standardizing the basal metabolism technique.

The Anthropometric Study

Numerous papers have appeared as portions of the work were completed. The first part of the anthropometric study was published in 1940. Data were reported for 1,013 girls

[1] Journal Paper No. J-1032 of the Iowa Agricultural Experiment Station, Ames, Iowa. Project No. 538.

[2] The award of $1,000 was divided among the five senior leaders of the mineral balance subproject: Hughina McKay of Ohio State University, Ruth Leverton of the University of Nebraska, Margaret Ohlson of Iowa State College, Martha Pittman of Kansas State College, and Genevieve Stearns of the University of Iowa.

ranging in age from 16 to 30 years, inclusive. Of these 356 were from Iowa, 88 from Kansas, 187 from Minnesota, 160 from Ohio, and 222 from Oklahoma.

The data from the different states were fairly uniform. The mean height and weight of the women measured exceeded measurements previously reported from the respective states. The chest diameter measurements of 437 women from Old American stock were less than those of the Old Americans reported by Hrdlička. Repeat measurements were also taken on women who remained in college. Data indicated that "the college girl is growing." This point is still under study.

Of Red Blood Cells, Food Choices

Research on diameter measurements of red blood cells made on 80 healthy college women, ranging in age from 17 to 24 years, presented data for an age group about which very little has been published. These should be useful in establishing a standard for women of this age in relation to their dietary habits.

The blood of 258 high school girls ranging in age from 12 to 19 years was also studied. Data were presented showing the average picture and factors of development which affected it. These data should be useful in interpreting the results with the college women.

The food choices of students were analyzed in relation to their living conditions; for instance, those students who lived at home, those who lived in apartments and cooked their own food, those who lived in college dormitories where they ate the food served to them or selected from the foods served, and students who bought their meals in restaurants and cafés. The trends in food habits seemed to be influenced definitely by the circumstances of living. These data are pertinent in the present emergency and will be helpful in teaching.

Of Intakes of N, Ca, P

The nitrogen intakes of 12 Kansas and 15 Ohio college women and the calcium and phosphorus intakes of 12 Kansas and 4 Ohio women have been determined from analysis of aliquots of foods eaten by the subjects whose diets were freely chosen for periods of from one to eight consecutive weeks.

More of the diets of the Ohio than of the Kansas subjects were deficient in the nutrients studied. None of the subjects studied had calcium intakes that fell below the Sherman adult standards, whereas several had low intakes of both nitrogen and phosphorus.

Data pertaining to calcium balances of young women on freely chosen and on controlled diets for several periods and of one young woman on the same type of diets for many longer periods have been assembled from six states and are ready for publication. This research shows the range of intakes necessary on freely chosen diets to insure calcium retentions. No study of this type has been done heretofore. It will be useful as a basis for dietary recommendations.

Of Calories, Iron Metabolism

Studies of the caloric intakes of 12 Kansas and 15 Ohio college women have shown that the mean caloric intake for the two states, both individually and collectively, was well below the standard commonly used for moderately active women.

Iron metabolism of college women has been studied by the Nebraska group only, because this is the only group with a laboratory equipped for such work. One-week studies of the iron metabolism of 99 young women have been made—one of the most extensive iron metabolism studies yet undertaken.

Findings on Basal Metabolism

An extensive analysis of the variability of the basal metabolism data from Iowa as well as a summation of the data from Iowa, Kansas, Minnesota, and Oklahoma has been made. This analysis showed that the method of selection of basal metabolism data may result in misleading interpretations; that to determine the trend of an individual's basal metabolism, only one observation per day is needed, but that more than one observation should be

made and that in extremely active college women the basal metabolism may reflect an inability to relax uniformly rather than a true basal metabolism. Age trends in basal metabolism and changes from year to year have also been studied.

Latest Work, Plans, Personnel

In 1941, when the work of the five-year period was summarized, it was evident that some amplification of certain phases of the study was needed. Therefore, in 1941–42, this was undertaken, and also a study of the vitamin C stores of the college woman was initiated. In addition, a committee was to correlate all data obtained in the major phases of the project in order to obtain an over-all picture of the women.

For 1942–43 the following plans have been made: first, to analyze the vitamin C data collected during 1941–42 and prepare it for publication; second, to study the relation of the high hemoglobin levels noted to the concentration of plasma ascorbic acid; and third, to study the relation of activity to vitamin C requirement. The detailed plans for this latter study are to follow preliminary tests to be run at Oklahoma during the summer.

The chairmen of the major units of study have been: Martha Pittman of Kansas State College, basal metabolism studies; Margaret A. Ohlson, Iowa State College, formed elements of the blood; Eva Donelson, University of Minnesota, anthropometric measurements; Hughina McKay, Ohio University, mineral balances; Ruth Leverton, University of Nebraska, iron metabolism; May Reynolds, University of Wisconsin, dietary studies. New in the group this year was Williamina Armstrong, Oklahoma A & M College, who replaced Gladys Kinsman as chairman of the vitamin C studies.

Other collaborators have been: Genevieve Stearns, University of Iowa, and Gertrude Cox, formerly of the statistics department, Iowa State College, now of North Carolina State College. Sybil Smith, principal experiment station administrator of the U. S. Office of Experiment Stations, has usually attended the conferences, and members of the staff of the U. S. Bureau of Home Economics have frequently been guests at conferences.

Each chairman has assumed senior authorship when the data were analyzed and papers prepared for publication. Footnotes on the research papers indicate the relationship of the paper to the co-operative project, the respective experiment stations, and departments in home economics colleges and universities.

Probably the greatest difficulty encountered has been that of keeping the experiments uniform. But once the techniques and plans were agreed upon, each school has adhered as closely as their local facilities permitted.

We who have collaborated on this regional project have thoroughly enjoyed our work. We have grown individually as well as collectively. We have become well acquainted with our fellow workers. We think in terms of the group rather than as isolated "researchers." Not only have we had an annual conference on our own work but we have also held informal discussions at national meetings, during vacations, or wherever two or more co-operators could get together. The experience has been well worth the energy expended.

Scrapbook Record

The Quarryville (Pennsylvania) High School home economics department has a loose-leaf scrapbook which records dinners, fashion shows—every type of entertaining done. Incoming classes find it an invaluable reference. It emphasizes the continuity of home economics in the school—a thing more valuable than any teacher.—MARY MARGARET LYNCH, JOURNAL reader-editor.

High Lights of the National Institute on Education and the War, August 28-31, 1942

JESSIE W. HARRIS

Miss Harris is director of the School of Home Economics of the University of Tennessee and was invited to attend the Institute which she reports, both as president of the AHEA and as an influential spokesman for higher education from her state.

WHAT educators can—and should—do to help win this global war was clearly and impressively outlined in the four-day National Institute on Education and the War held in Washington, D. C., August 28 to 31.

A statement drawn up by a committee and read the last afternoon of the Institute admirably summarizes the session as follows:

"It has become increasingly evident that the present world conflict has reached such proportions and such a stage that every force at the command of the people of the United States must be thrown into the war at the earliest possible moment. The time of victory will be reduced in proportion to the extent to which we fully utilize these forces. . . .

"During the four days, conclusive evidence has been submitted by the armed forces of the United States and those associated with them that not a moment should be lost in the full use of the power of the nation to the war effort.

"Never was there a time when educational workers faced heavier responsibilities for adjusting the school program to a great national need. Never was there a time when these workers might take greater pride in the significance of their work, never a better opportunity to serve children, young people, and the nation.

"The urgency of the situation requires that important adjustments be made in the programs of the elementary and high schools immediately. . . .

"Modification of school programs should provide opportunity for curricular, extracurricular, health service, and community service programs in order that the student body may prepare itself to meet the demands of the armed forces, industry, and community service."

Among the twenty-six program recommendations are these which are of special concern to home economists:

Curricular programs should provide for:

"Courses in industrial arts related to war needs and with special application to the operation of tools.

"A greater number served by practical courses in home economics, with increased emphasis on home care of the sick, nutrition, child care, cooking, sewing, and home management designed to assist home living under war conditions.

"Teaching units giving increased emphasis on health in both the elementary and high schools.

"Courses to give a knowledge of war aims and issues as well as actual experience in community undertakings."

Extracurricular programs should provide for:

"School lunches giving special attention to providing proper nutrition for the child.

"Student assembly programs designed to give children an appreciation of the fact that they have a definite part in the defense of the United States.

"The contributions of such organizations as Girl Scouts, Boy Scouts, Campfire Girls,

4-H Clubs, Junior Red Cross, Future Farmers of America, and home economics clubs.

"Student councils and similar organizations to give training to students in the American way of life."

Health services should provide for: "The correction of physical deficiencies as early and as often as is necessary.

"Physical fitness programs designed to increase the bodily vigor of youth."

Community services programs should provide for: "Promoting salvage drives, home assistance, farm labor, home-gardens, and other community undertakings.

"Co-operating with other community agencies in lessening juvenile delinquency which increases as homes become broken or disrupted through Army service, employment changes, or other causes.

"Utilizing every occasion to give to parents an appreciation of how the schools serve youth.

"Developing a feeling of security . . . in our ideals.

"Co-operating with existing agencies of defense.

"Assistance . . . in consumer buying.

"Library facilities to make available materials and services that will enable the people to make intelligent decisions on war and post-war issues."

John W. Studebaker, U. S. Commissioner of Education, pointed out in his talk the afternoon of August 31 what American schools and colleges can do to help win this war. The following are excerpts from his address:

"Only the dullest sort of wishful thinking could cause any of us to doubt that education too must undertake conversion to the pressing business of total war. The special contributions which elementary schools can make to winning this war are expansions of the kinds of tasks which they are already accomplishing: the care and protection of young children in nursery schools and kindergarten; the provision of before- and after-school programs of recreation for children of working mothers in congested war-service areas; the expansion of school facilities and services to include nutritious school lunches; closer co-operation with parents in safeguarding children's health and morale."

In addition, he said, schools can participate in vital war-related activities such as campaigns of salvage and conservation; gardening and food canning; caring for clothing; purchasing war savings stamps. In so doing the elementary schools can become organized communities of action in which principals, teachers, pupils, and parents will plan co-operatively.

For the high schools more drastic modifications in curriculum and organization are required. In addition to training men not suited for military service, we face a task of replacement training; training of girls and women to replace men who have been called to the colors from farms and factories; training girls to replace men gone from stores and offices and from essential community service occupations; training younger boys and girls to replace housewives employed outside the home.

First, there must be greatly improved facilities for occupational information and guidance into critical services. Second, there must be a new emphasis upon programs of physical fitness. Every high school boy and girl must be given the opportunity to participate in a program of physical activities appropriate to his or her interests and abilities and geared to national needs. This program should include health instruction and knowledge and practice of the principles of nutrition. . . . Third, larger numbers of pupils must master mathematics and science.

Another element, Dr. Studebaker continued, is training of youth for citizenship in a democracy and for an understanding and appreciation of our allies in the United Nations so as to make possible the winning of the peace. There should also be instruction concerning wartime economics.

"The schools must aid in enrollment of high school senior girls in the federally financed

program of vocational training for war production workers.

"I realize that there are serious obstacles to be overcome in converting the high school curriculum to make it serve the war effort but all must be faced and overcome. Given educational vision and a sense of urgency among school administrators, high school youth, their parents, and the community in general can be relied on to help in many ways."

As to the colleges and universities, he showed that they can adjust their entrance requirements so as to serve every qualified student who needs the services of the college to prepare him for war work. In many cases individual high school students who will not have fully met the requirements for high school graduation should be allowed to transfer to colleges.

"The colleges and universities can make available facilities for housing, feeding, and providing health care for Army and Navy contingents sent to them, regardless of whether or not the instruction is to be given by the institution or by the Army and Navy."

"Many community workers other than teachers are in need of refresher or supplementary courses to help them in their work. Public health workers, child-care workers, volunteer discussion leaders, civilian defense workers, social workers, and other community service workers should be able to call upon the extension education resources of the colleges and universities for stimulation and needed training."

"Colleges and universities need to work out plans of accelerating their academic calendars and of increasing their financial aids to students to make possible pursuance of accelerated programs regardless of the student's economic status."

In conclusion he said: "I hope that out of our association together these last few days, there has come a greater clarity of understanding; a more poignant sense of the terrible urgency of a genuinely all-out war effort; a willingness to try to communicate that sense of urgency to our colleagues in every city, county, state, and institution here represented —to the end that the schools and colleges of the nation shall be made to pull their full share of the load up the steep incline to victory."

What Teachers Must Do: The addresses of other men directing war activities provided a rich background of information as to the urgency of the need for curriculum adaptation.

It is obvious that "home economics as usual" is no more acceptable than business as usual. As never before home economics is being called upon to help families and individuals adjust their living to wartime needs. Home economics teachers—in the schools and colleges, in all types of adult education work—have a responsibility to participate in making the plans for such adjustments.

They must extend their services to all who need them in the school and community. They should help both adults and day school students to understand the battle on the home front; the importance of saving, serving, and conserving; of buying as many "shares of victory" as possible through war savings stamps and bonds; of learning new skills to help family living.

They should make all their own spending a contribution to victory and get others to do likewise through buying only necessities where purchases are in competition with the needs of the armed forces, through buying only under the price ceiling so as to help check inflation, and through helping merchants to understand the anti-inflation program.

They should encourage sales of war stamps and bonds through home economics clubs. They should help make an adequate school lunch available to every child. They should help and get others to help in civilian defense programs, day care of the children of working mothers, and the various salvage campaigns.

Today's crisis is home economics' priceless opportunity to serve the nation and, through that service, to achieve rich professional growth.

In Short . . .

Curricula to Fit the Times

ALMA KEYS
State Department of Education,
Little Rock, Arkansas

The impact of war on the family causes stresses and strains which must be recognized by the school. Educators must plan with individuals and families in order that values in family living may be conserved.

Families are having to make many adjustments to a changed world: to separation from the father, to employment of the mother outside the home, to shifting standards of living, to scarcities of consumer goods at a time when many incomes are rising, to acute housing shortages.

Our Problems

The Office of Price Administration is calling upon such groups as ours to help individuals understand the whys and hows of rationing, price ceilings, and other problems.

Among our problems are: (1) helping families to make wartime adjustments, (2) developing democratic community leadership, and (3) developing a functioning education program.

Educators and community leaders should explore together ways of helping families solve their problems. Home visits and teacher counseling are devices which help the teacher understand family problems and at the same time help the family to understand services that the school may render.

The home economics teacher should evaluate her philosophy of education from time to time and analyze critically the effects of her teaching in the lives of people with whom she works.

It is the responsibility of educators to provide an environment that will meet the needs of the individual and stimulate his development.

John Dewey in his book *Democracy and Education* has this to say: "To be satisfying, a social experience must give the individual: (1) a feeling of security, a feeling that he is an accepted member of the group; (2) freedom from conflicts, strains, and tensions in group relationships; and (3) in reference to himself, the experience must further his plan for his life and be in accord with his standards."

Basis of Curriculum Planning

Problems related to everyday living of families need to become the bases for all curriculum planning. How families can be helped to use their resources to the fullest is a challenge that requires careful planning followed by a plan of action with continued evaluation.

This war may bring families closer together if family members can be helped to: (1) keep calm and physically fit, (2) conserve and use resources wisely, (3) build and strengthen morale, (4) provide wholesome recreation, and (5) understand and practice democracy.

Guiding the individual to recognize his problems and work toward their solution should be basic in our curriculum planning in wartime. These problems offer opportunities for developing leadership.

The teacher who is conscious of the growth of the individual through co-operative work is helping develop leadership for living in a democracy. She no longer sets standards for individuals but provides an environment which will place the individual in real life situations.

A functioning curriculum for wartime demands that we: (1) explore effective ways of working with individuals, (2) provide an environment which offers experiences in problem solving, and (3) explore effective ways of evaluating work.

Guidance in Democratic Living

Hollingshead in *Guidance in Democratic Living* states, "Teachers will think in terms of growth in social attitudes and abilities, rather

than in terms of learning social attitudes and abilities . . . . If a child is to develop the attitudes and abilities of co-operation, he must be given the opportunity of planning and working with others toward the achievement of common goals; if he is to develop a sense of personal responsibility, he must be permitted to live and work in a co-operative group. If he is to be self-directing he must be given the opportunity of basing his actions upon the results of his own experiences and intelligence."

With this as our guide in setting the stage for growth, we are interested in the whole child, rather than the finished garment that she made in class or how she will give back facts learned from textbooks. We ask ourselves such questions as: How does this individual work with others? What is her attitude toward sharing? Is she able to plan ways of solving problems?

Home economics teachers are seeking to understand better the problems concerned with family and community living. They are becoming increasingly interested in life as it is lived in the family, in the community, and in the nation.

EDITOR'S NOTE: The above article is a condensation of a talk given by Miss Keys, state supervisor of home economics education in Arkansas, on June 30 in Denver at a department of home economics education session of the convention of the National Education Association.

Teaching Domestic Subjects in Great Britain

ETHEL WILLANS

Elstree, Hertfordshire, England

At the outbreak of war, the first responsibility of the teachers in all large towns in Great Britain was to assist with the evacuation of the school children to less vulnerable areas. The work of assembling and looking after them on their journeys was followed by the more complicated task of settling them into billets and seeing that schooling was available to them in the local schools, either as a complete unit or by absorbing them into existing classes.

Work with Children

The work of a number of the domestic subjects teachers was completely interrupted for a time as there was little accommodation for extra classes in the reception areas. So, for a short time, their main task was to deal with and settle the many emergencies that were bound to arise with such an influx of extra pupils into country districts with no extra accommodation.

They also took on the job of looking after the children's clothing, preparing communal meals, visiting the billeting hostesses, and settling any complaints. They taught hygiene, needlework, and general subjects in the schools.

Teachers who remained in the towns spent their time visiting the homes of the children who had not been evacuated and endeavoring to carry on their education by holding classes in any room available. Many parents kindly lent a room for this purpose.

After a short period it was found that so many children remained with their parents that schools were re-opened and many domestic subjects teachers found they had adequate employment in teaching the children, both boys and girls, simple cookery, laundry work, and the care of their clothes.

Wartime conditions necessitated a new method of approach to handle the problems arising from the rationing of foodstuffs. It became necessary to train the children in all aspects of home economy, the use of home-produced foods, the need for economy in using them, and the salvage and collection of home waste. As many of the parents were employed long hours on war work it was essential to give instruction to the children on laundry, pressing, cleaning, and the adaptation and repair of garments as their clothes began to show signs of wear.

Adult Food Education

With the increase of the rationing of foods, a food education campaign for adults was started.

Local education authorities were given the responsibility of dealing with this work, and the greater part of it was undertaken by the domestic subjects teachers.

To them fell the task of educating the people on how to tackle this new problem. For this purpose all means available were used to take the knowledge to the people. Stalls were set up in market places and demonstration vans toured the streets and had short demonstrations in shopping centers. Large stores lent accommodation for demonstration purposes, mobile vans visited housing estates, and information on food was given to the residents in their houses.

Advice bureaus were set up in busy thoroughfares, in welfare clinics, in outpatient departments at hospitals. Demonstrations were given in halls and schools. Parents were invited to come to the schools to see the children cook, even to bring their own rations and cook them themselves. Every effort was made to introduce the simpler living and the correct use of homegrown foods.

Emergency Feeding

With the intensification of the raids, teachers were called upon to assist in the important work of feeding the bombed-out population and to provide meals and comforts for them and the civil defense workers. For months they worked nobly for long hours at this important work until others could be trained to take it over.

Their next piece of work was the organizing of the British restaurants, opened by the government to give adequate, well-balanced meals at low cost to workers. To this excellent piece of work we owe the good health of the nation today.

After people were trained to take over this work, the teachers returned to their normal duties. Owing to the lull in heavy air raids, many children had returned home, but as many parents were spending long hours on war work, there was a fear that the children were not being adequately fed.

For Each Child a Hot School Lunch

The government decided that facilities should be available for every child to have a hot meal at school. Once more the domestic subjects teachers answered the call and took over the organizing of this vast piece of work. They performed marvels in producing adequate meals for the children, often with limited accommodations and scanty equipment until proper arrangements, help, and equipment could be made available.

Now with the rationing of clothes they are undertaking "Make and Mend" classes and teaching the care of clothing and all alterations.

This is a brief summary of some of the duties performed by our domestic subjects teachers as their contribution to the war effort. What could be of greater value to the nation than the health and well-being of its children? The teachers are doing a noble work and their reward is in the happy, healthy children.

Dietitians Desperately Needed

Dietitians who are well trained, intelligent, healthy, and emotionally stable are desperately needed for work in government hospitals. Requirements: a 4-year college course with dietetics major plus graduate training in an approved hospital. Salary: subsistence and $1,800 a year. No written test. Write Civil Service Commission, Washington, D. C., for application forms.

Comment . . .

Right Turn, Uphill

Lay aside all thoughts of education as usual. Convert your curriculum to make it serve more directly the war effort. These were the appeals—the demands—heard again and again by the 600 educators attending the National Institute on Education and the War last August.

No easy task, this wartime conversion of curricula! But given educational vision and a sense of emergency on the part of administrators, obstacles to conversion can be overcome, as the high schools of Washington, D. C., testify.

D. C.'s Curricular Changes

Beginning this fall every boy and girl in every senior high school in the District of Columbia will have in his and her curriculum a two-period, one-semester basic course in nutrition; and every senior girl will have a two-period, one-semester course in home nursing. These are a part of the program for building physical fitness in the city's youth.

Heretofore the teachers of home economics, science, and physical education have shared the health area in the District schools, but all have worked independently. The home economics courses were all elective, and the physical education classes occupied two periods a week.

Now, by action of the Board of Education on September 9, there are five periods of physical education a week: three of activity and two of health instruction. In 10A the two periods of health instruction are in basic physiology and anatomy and are taught by physical education instructors. In 10B, the two periods are in basic nutrition and are taught by the home economics staff. For all the girls, the two periods in 12A are to be home nursing, taught by the home economics faculty.

The Basic Nutrition Course

Obviously, the basic nutrition course cannot be a laboratory course. But the instructor will have classes organized according to sex and physical need; she will give demonstrations to make her teaching graphic; she will have the school cafeteria where most of the students get their lunch as a place for checking the effectiveness of her teaching.

The teaching load for the home economists will be heavy. But instructors willingly accept this load as their contribution to the war effort.

The Community Pattern

These curricular changes in the Washington, D. C., high schools have been brought about through the vision and patient persistence of educators, local newspapers, and social-minded citizens under the leadership of Mrs. Ola Day Rush, director of home economics in the District's public schools. It has involved a tremendous amount of creative thinking and hard work, and much downright drudgery lies ahead, but the net gains make the job supremely worth while.

As Mrs. Rush says, "Home economics in the U S A is at the crossroads, and the right turn is uphill."

Q. E. D.

"Home economics as usual" is out for the duration of this total war. This is now axiomatic. And it follows as the night the day that state home economics association meetings and programs *as usual* are also out for the duration.

Last year eight of the thirty-three state associations reporting to the AHEA headquarters said that their single annual meeting came after March 1. This year when the nation turns to home economists as never before in history for leadership in local, state, and national programs this professional group

more than ever needs the inspiration and the practical aid which district and state meetings can give. Too little and too late will not be the charge directed at state groups which mobilize their forces promptly and effectively for the tremendous job ahead.

From an Ill Wind, Good

The war, in spite of all its destruction and waste, is hastening progress toward some of the goals dear to the hearts of home economists: standards, simplification, and labeling of commodities. An encouraging number of Office of Price Administration orders have pegged prices more or less effectively to quality and specifications: those on sheets, beef, soap, men's work clothing, and rubber heels, for example.

The American Standards Association is under contract to help develop emergency standards for OPA and the War Production Board. It has already drawn up standards for gas ranges and for hot-water heaters and is now at work on standards for safety shoes for hazardous industries and for boys' and girls' clothing sizes.

On September 6 Leon Henderson, OPA administrator, announced creation of a standards division in the OPA, to aid in the attack on the hidden price increases that arise from debasement of quality. This division will work out specific standards to tie to OPA regulations wherever quality is a factor. Informative labeling may also be required by these OPA orders. Standards for rationed commodities, to insure fair quality as well as quantity, is another field allocated to this division. So, too, is rent; specialists will define facilities and services which tenants must receive for their rentals in areas under OPA regulation.

Though we should not expect too much too soon from these moves, they are certainly gestures in the right direction.

United Action

On each of the state and local Wartime Commissions on Education which are now being organized to integrate the schools into a genuinely all-out war effort there should be one home economist. To secure this representation, home economists in three national organizations have joined forces: the National Education Association and the American Vocational Association through their home economics sections, and the American Home Economics Association.

Among the delegates representing each of these associations at the National Institute on Education and the War held in Washington, D. C., August 28 to 31 were: Florence Fallgatter of Iowa State College, a vice president in the AVA, representing home economics; Amanda Ebersole of Drexel Institute of Technology, chairman of the home economics department of the NEA; and Jessie W. Harris of the University of Tennessee, president of the AHEA. Miss Fallgatter and Miss Ebersole are, of course, also AHEA members.

The three women collaborated on a letter sent September 15 to the presidents of the state home economics associations, asking that they lose no time in recommending women to serve on the state commissions. The home economics appointees can then help plan the state and local institutes which will be held this fall and winter.

In most states the home economics nominee will probably be the state supervisor of home economics education, as she can work Institute activities into her schedule more easily than can most other home economists.

Whoever is selected for work on the state or local Wartime Commission on Education will have a vital share in carrying out the admonition of President Roosevelt read to the National Institute members: to make every schoolhouse a service center for the home front.

Research . . .

Colorfastness of Women's and Children's Wearing-Apparel Fabrics[1]

Northeastern Regional Experiment Station Co-operative Textile Project

HELEN E. BORTON and MINA BUTZ with POLLY BELL K. MOORE, DAISY DEANE WILLIAMSON, INEZ LA BOSSIER, BEULAH BLACKMORE, BLANCHE KUSCHKE, and PAULINE BEERY MACK, *Chairman*

Miss Borton and Miss Butz are respectively instructor and graduate assistant in textile research at the Ellen H. Richards Institute at The Pennsylvania State College; Dr. Moore is on the staff at the University of Maryland; Miss Williamson is at the University of New Hampshire; Miss LaBossier was on the staff of the New Jersey State College for Women when this study was made but has recently been on the staff of the Consumer Division of OPA; Miss Blackmore is at the New York State College of Home Economics, Cornell University; Mrs. Kuschke is at Rhode Island State College; and Dr. Pauline Beery Mack, chairman of the project, is director of the Ellen H. Richards Institute.

Introduction

NOW, at a time when the war has increased public concern as to colorfastness of textile fabrics, the findings of the Northeastern Regional Experiment Station Co-operative Textile Project are of unusual interest and value. This project has covered nearly seven years of laboratory tests and practical wearing performance of women's and children's cotton, wool, silk, and rayon woven textile goods.

In the study, which is still in progress, enrollees in extension courses, students in college and university classes, and consumers who can be reached by the several co-operators submit additional amounts of fabric for laboratory test when they purchase yard goods for making women's or children's wearing apparel. In addition, the co-operating consumers keep a wearing record of the garment made from the particular fabric and submit the worn-out garment for inspection and analysis as soon as it is no longer regarded as wearable by the person for whom it was made. The methods followed in carrying on the investigation were described by Searle, Chapman, and Roseberry (*1*) in the March 1939 issue of the JOURNAL OF HOME ECONOMICS.

Between 1935, when this co-operative textile project was begun, and June 1942, when this report was prepared, 1000 colored fabrics had been given laboratory tests and 211 worn-out garments, for which the consumer records were entirely adequate, had been returned for

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Also authorized for publication by the Maryland, New Jersey, and New York Experiment Stations.

inspection. Reports on various parts of the study are being published from time to time.

Laboratory tests were made for breaking strength; bursting strength; colorfastness to laundering; colorfastness to dry cleaning; colorfastness to perspiration; crocking; colorfastness to pressing; shrinkage; and water-repellancy and crease-resistance, if sales claims had been made for these latter two characteristics.

The present report describes results of the laboratory tests and the actual performance of the fabrics as regards the various types of colorfastness. The objectives of this part of the entire study are twofold: (1) to determine the colorfastness properties of representative textile fabrics used for making women's and children's wearing apparel and (2) to ascertain how closely the present standard laboratory methods of testing textile fabrics for colorfastness performance predict the actual performance of the fabrics during wear.

It is hoped that these findings may make a contribution toward the promulgation of definitions and standards for colorfastness which will be of value to the ultimate consumer.

PART I

Colorfastness Characteristics of 1000 Fabrics

To answer the question of colorfastness characteristics of representative textile fabrics, an analysis was made of the laboratory test data on the 1000 textile fabrics entered in the Northeastern Regional Experiment Station Co-operative Textile Project since the beginning of the study in 1935.

Methods of the Study

Fiber Content of Fabrics

The 1000 fabrics were distributed as follows as to the fiber content: cotton, 32.8 per cent; wool, 10.5; wool mixtures, 7.7; silk, 8.5; viscose, 22.9; acetate, 2.2; viscose and acetate, 12.0; rayon mixtures other than those of viscose and acetate, 3.4 per cent.

Colorfastness Performance Rating Scheme

Four classifications were used in grading the responses to the colorfastness tests: Class 1 denoted *no observable fading*; Class 2, *only slight fading*; Class 3, *some fading*, but not sufficient to render a garment unfit for further use; and Class 4, *severe fading*, sufficient to render a garment unfit for further wear.

A series of fabrics of the major colors representing each class of color performance was used in training those who were to classify the fabrics on the basis of colorfastness performance. Moreover, swatches of the test fabrics remained in the files for comparison with returned worn-out garments so that classifications of the latter for colorfastness could be compared with laboratory findings.

In the case of a colored fabric carrying more than one color, as in prints or stripes, the classification was based on the color showing the greatest degree of fading.

Laboratory Tests Used

The laboratory tests for colorfastness were those recommended by the National Bureau of Standards in a series of standard tests for woven textile fabrics (*2*). The present standard is Commercial Standard 59-41, which embodies certain modifications of the test method set up by the initial standard of 1936. This standard was used for all colorfastness tests except those for crocking and for pressing, in which the 1939 version of the test was followed. This was done because radical changes in procedure were made in these two tests with the 1941 standard and insufficient fabric was available for repeating the test with all of the fabrics in this case.

All fabrics were given the entire series of colorfastness tests except those involving laundering and dry cleaning. Sales informa-

tion given at the time of purchase determined choice of these two tests. If the fabric was recommended as launderable, it was given the laundering tests; if dry-cleanable, the dry-cleaning tests. If the fabric was said to be both launderable and dry-cleanable, it was given both tests.

Laundering

The fabrics were laundered or dry-cleaned, as shown in table 1.

TABLE 1

Distribution of fabrics as to receipt of laundering or dry-cleaning treatments

TYPE OF FABRIC AS TO FIBER CONTENT	NUMBER GIVEN LAUNDERING TEST ONLY	NUMBER GIVEN DRY-CLEANING TEST ONLY	NUMBER GIVEN BOTH TESTS
Cotton (328)	317	11	0
Wool (105)	0	105	0
Wool mixtures (77)	1	76	0
Silk (85)	24	58	3
Viscose rayon (229)	107	78	44
Acetate rayon (22)	1	19	2
Viscose and acetate mixtures (120)	10	90	20
Rayon mixtures other than viscose and acetate (34)	11	23	0
Total (1000)	471	460	69

Of the total fabrics, 317 were laundered according to the three methods described for the testing of cotton and linen as to launderability; 154 were given the milder laundry test, intended for fabrics other than cotton or linen; 460 were dry cleaned; and 69 of the fabrics were subjected both to the laundering method recommended for fabrics other than cotton or linen and to the dry-cleaning tests.

When a cotton fabric was laundered, it was given three of the laundry tests for cotton or linen fabrics recommended in the Commercial Standard CS 59-41, Section VIII, namely: Treatment I, washing at 105°F with a neutral soap and no bleach; Treatment III, washing at 160°F with a built soap (one mixed with an alkaline reagent); and Treatment IV, same as III with the addition of one per cent bleach.

Chlorine bleach is not recommended for use in laundering colored cottons or linens, because many otherwise satisfactory dyes will fade in its presence. The standard laundry procedure for the Pennsylvania certified laundries does not permit the use of chlorine bleach on colored work, nor do most recommended household formulas for washing colored cottons and linens include this reagent. Nevertheless, chlorine is sometimes used in laundry practice with colored work because of its sterilizing and stain-removal values; hence, Treatment IV was included in the Commercial Standard tests.

If a silk or rayon fabric was laundered, it was given a washing treatment with neutral soap at 100°F, according to the method recommended in the procedure mentioned. The last technique is designated, in the standard test methods cited, as a laundry test method for fabrics other than cotton or linen.

Dry Cleaning

Two dry-cleaning methods were used. Dry cleaning by the dry method was done according to CS 59-41, Section VI. This involved the use of dry solvent, Stoddard solvent (a petroleum distillate less inflammable than motor fuel), together with a dry-cleaning soap containing an extremely small amount of moisture and an organic reagent which disperses the moisture through the solvent.

Dry cleaning was also done by the wet method, which involves the immersion of the fabric in dry-cleaning solvent and the subsequent brushing of the fabric with water and neutral soap on a slab while the fabric is still saturated with the dry solvent. This test is applied because of the fact that the dry-cleaning process requires the use of water for areas badly soiled with water-borne stains; the latter are not removable by dry solvent and dry-cleaning soap.

Light

Fabrics were tested for colorfastness to light by exposing them for 40 hours in a Fade-Ometer of the FDA type, according to Section

X of the CS 59-41 recommended standard tests.

Perspiration

An artificial acid perspiration—containing 10 grams sodium chloride, 1 gram lactic acid USP 85 per cent, and 1 gram disodium orthophosphate (anhydrous) made up to one liter with distilled water—was used to simulate fresh perspiration and was applied according to the standard methods used throughout the study (CS 59-41, Section XI).

A second artificial perspiration test was made with an alkaline solution simulating aged perspiration and containing 10 grams sodium chloride, 4 grams ammonium carbonate USP, and 1 gram disodium orthophosphate (anhydrous) made up to one liter with distilled water. The test was applied according to the standards which are used in the study (CS 59-41, Section XI).

Crocking

A crocking test designed to determine whether the dyed fabric will rub off onto another surface was applied to the fabric in both the dry and wet condition. The method of test was that outlined in CS 59-39, Section VI.

Dry Pressing

The dry pressing test was designed to determine whether the fabric changes color with a moderately warm iron and was carried on according to CS 59-39, Section XI.

Findings

The colorfastness results of the respective tests, for all fabrics, irrespective of fiber content, are given in table 2. Also, in table 3 colorfastness data are presented not only for all of the fabrics grouped together but also for each group of fabrics classed as to fiber content.

Results of the Laundry Performance Tests

All of the cotton fabrics in the study were given the three laundering tests. When the test with neutral soap and no bleach was applied to them (as will be observed from table 3), 88.3 per cent of the fabrics showed the highest class of performance; when built soap was used, 74.1 per cent were in the highest class; and when built soap and a one per cent solution of chlorine bleach were used, only 52.2 per cent were in this class.

TABLE 2

Colorfastness Performance of 1000 fabrics tested

TEST	FABRICS			
	Class 1	Class 2	Class 3	Class 4
	per cent	*per cent*	*per cent*	*per cent*
Laundering				
Of cotton and linen				
Test I	88.3	11.1	0.6	0.0
Test III	74.1	23.4	2.2	0.3
Test IV	52.2	37.0	7.2	3.6
Of fabrics other than cotton and linen	58.2	27.8	9.9	4.0
Dry cleaning				
Dry method	95.6	3.9	0.5	0.0
Wet method	47.4	29.9	12.9	9.8
Light	42.0	26.1	17.3	14.6
Perspiration				
Acid	61.5	22.5	8.6	7.4
Alkaline	57.5	22.9	9.6	10.0
Crocking				
Dry method	74.7	24.1	1.2	0.0
Wet method	27.7	50.1	17.9	4.3
Pressing				
Dry method	86.9	12.8	0.2	0.1

It is noteworthy that only 37.1 per cent of the silk fabrics were in the highest class of performance in the only laundry test made on silk, namely, the use of neutral soap at a low temperature (100°F). On the other hand, 64.9 per cent of the viscose rayon fabrics were in the highest class of performance with respect to this laundering test, with 100 per cent of the acetate, 46.7 per cent of the viscose and acetate, and 45.5 per cent of the mixed rayons other than viscose and acetate in this highest class.

It should be emphasized in connection with the results on acetate, however, that only three acetate fabrics were recommended by the sales agency for laundering; hence, the number is not adequate for drawing conclusions.

If the tests made are truly representative of wear performance, it is obvious from the above that the fabrics entered in this study, which represented a broad selection of prices and types, were not generally satisfactory in their performance during laundering.

Results of Dry-Cleaning Tests

Taking the 529 fabrics tested for dry cleaning as a whole, 95.6 per cent were in Class 1 with respect to colorfastness during dry cleaning by the dry method. This comprises dry cleaning based upon the standard dry-cleaning procedure, in which a volatile solvent, such as Stoddard solvent, and a dry-cleaning soap are used to remove general soil from textile fabrics.

The wet dry-cleaning test placed only 47.4 per cent of the total 529 fabrics in the highest class of color performance. This test simulates the standard practice of dry cleaners, which is to sponge all or certain areas of fabrics with water and a neutral soap after immersing in dry-cleaning solvent, if the fabric has considerable amounts of water-borne staining material thereon. It is obviously a more rigorous procedure than is dry cleaning alone, insofar as colorfastness is concerned. If water-soluble stains are to be removed during dry cleaning, however, there is at present no way to avoid use of water in one way or another in the cleaning procedure. The dye on the fabric must therefore be fast to a water treatment if the fabric is to be truly satisfactory for dry cleaning.

When the fabrics were grouped on the basis of fiber content, the same general trends were observed with respect to the dry-cleaning tests by the dry and the wet methods. The lowest performance of any of the fabrics was that found for silks, in which only 22.9 per cent of the fabrics were in the highest performance class in the wet dry-cleaning test.

Results of Light Colorfastness Test

When all of the 1000 fabrics were grouped together, 42 per cent were found to be in the highest class of colorfastness performance after they had been exposed in a Fade-Ometer for 40 hours under the conditions of the test. In the second class of performance there were 26.1 per cent of the fabrics; in the third, 17.3 per cent; and in the lowest class, 14.6 per cent.

The groups of fabrics had the following percentages in the highest colorfastness class. Wool was highest, with 63.8 per cent of the all-wool fabrics and 62.3 per cent of the wool mixtures in this class; viscose rayon had 44.6 per cent; cotton, 41.5 per cent; acetate rayon, 36.4 per cent; rayon mixtures other than acetate and viscose, 32.4 per cent; viscose and acetate mixtures, 27.5 per cent; and silks, 17.7 per cent in the highest class.

If the results of this test are truly representative of the performance of textile fabrics on the market, as far as light colorfastness is concerned, it is again evident that fabrics show a generally less satisfactory behavior in this respect than is desirable, if long wear and good light colorfastness are the bases of selection.

Results of Perspiration Tests

When tested by artificial acid perspiration, 61.5 per cent of all of the fabrics were found to be in the best performance class on the basis of colorfastness, with 22.5, 8.6, and 7.4 per cent of the fabrics in the three successively lower classes.

In the test with artificial alkaline perspiration, the results were somewhat similar, with a slightly lower percentage in the highest performance class. On the basis of performance in the two perspiration tests, cotton fabrics proved to have the highest percentage of fabrics in the highest colorfastness class; viscose rayon was second; wool and wool mixtures were third; acetate rayon was fourth; rayon mixtures other than acetate and viscose were fifth; silk was sixth; and viscose and acetate rayon mixtures were seventh.

Again, if the results of this test are repre-

TABLE 3

Percentage of fabrics in respective colorfastness classes in the different tests

TYPE OF FABRIC	LAUNDERING				DRY CLEANING	
	With Neutral Soap	With Soap and Alkaline Builder	With Soap and Alkaline Builder and Chlorine Bleach	With Neutral Soap and Mild Temperature Suitable for Silks and Rayons	Dry Method	Wet Method
	per cent	*per cent*	*per cent*	*per cent*	*per cent* (11 special cotton fabrics)	*per cent*
Cotton				(Cotton fabrics were not given this test)		
Class 1*	88.3	74.1	52.2		100.0	45.5
Class 2†	11.1	23.4	37.0		0.0	45.5
Class 3‡	0.6	2.2	7.2		0.0	0.0
Class 4§	0.0	0.3	3.6		0.0	9.0
Wool	Wool fabrics were not given any of the laundering tests					
Class 1					93.3	44.8
Class 2					4.8	21.9
Class 3					1.9	11.4
Class 4					0.0	21.9
Wool Mixtures	Wool mixtures were not given any of the laundering tests					
Class 1					97.4	47.4
Class 2					2.6	27.6
Class 3					0.0	11.8
Class 4					0.0	13.2
Silk	Silk fabrics were not given the cotton laundering tests					
Class 1				37.1	93.5	22.9
Class 2				33.3	6.5	37.7
Class 3				22.2	0.0	27.9
Class 4				7.4	0.0	11.5
Viscose Rayon	Rayon fabrics were not given the cotton laundering tests					
Class 1				64.9	95.2	62.2
Class 2				26.5	4.8	27.1
Class 3				6.6	0.0	8.2
Class 4				2.0	0.0	2.5
Acetate Rayon	Rayon fabrics were not given the cotton laundering tests					
Class 1				100.0	95.3	76.2
Class 2				0.0	4.7	23.8
Class 3				0.0	0.0	0.0
Class 4				0.0	0.0	0.0
Viscose and Acetate Rayon	Rayon fabrics were not given the cotton laundering tests					
Class 1				46.7	97.3	44.5
Class 2				26.7	1.8	36.4
Class 3				20.0	0.9	14.6
Class 4				6.6	0.0	4.5
Other Rayon Mixtures	Rayon mixtures were not given the cotton laundering tests					
Class 1				45.5	95.6	34.8
Class 2				45.5	4.4	34.8
Class 3				0.0	0.0	17.4
Class 4				9.0	0.0	13.0
All Fabrics						
Class 1	88.3	74.1	52.2	58.2	95.6	47.4
Class 2	11.1	23.4	37.0	27.8	3.9	29.9
Class 3	0.6	2.2	7.2	9.9	0.5	12.9
Class 4	0.0	0.3	3.6	4.1	0.0	9.8

* No observable fading. † Only slight fading. ‡ Some fading. § Severe fading.

TABLE 3 (*continued*)

Percentage of fabrics in respective colorfastness classes in the different tests

TYPE OF FABRIC	LIGHT	PERSPIRATION		CROCKING		PRESSING
		Acid	Alkaline	Dry Method	Wet Method	
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
Cotton						
Class 1	41.5	84.2	83.9	71.0	17.1	97.9
Class 2	31.4	12.8	14.0	27.7	52.4	1.8
Class 3	16.2	1.8	0.9	1.3	25.6	0.0
Class 4	10.9	1.2	1.2	0.0	4.9	0.3
Wool						
Class 1	63.8	58.1	41.0	62.8	45.7	71.5
Class 2	14.3	18.1	24.8	35.3	38.2	28.5
Class 3	14.3	14.3	13.3	1.9	10.4	0.0
Class 4	7.6	9.5	20.9	0.0	5.7	0.0
Wool Mixtures						
Class 1	62.3	61.1	42.8	76.6	31.2	75.3
Class 2	28.6	24.7	36.5	22.1	49.4	24.7
Class 3	6.5	9.1	5.1	1.3	14.3	0.0
Class 4	2.6	5.1	15.6	0.0	5.1	0.0
Silk						
Class 1	17.7	28.3	24.7	58.8	27.1	82.3
Class 2	25.9	34.1	22.3	37.6	55.3	17.7
Class 3	18.8	18.8	24.7	3.6	15.3	0.0
Class 4	37.6	18.8	28.3	0.0	2.3	0.0
Viscose Rayon						
Class 1	44.6	66.4	64.1	87.3	29.7	90.9
Class 2	23.1	22.2	22.7	11.8	56.3	9.1
Class 3	20.1	7.0	8.8	0.9	11.8	0.0
Class 4	12.2	4.4	4.4	0.0	2.2	0.0
Acetate Rayon						
Class 1	36.4	45.5	50.0	100.0	81.8	100.0
Class 2	22.6	40.8	31.8	0.0	13.7	0.0
Class 3	27.3	0.0	4.5	0.0	4.5	0.0
Class 4	13.7	13.7	13.7	0.0	0.0	0.0
Viscose and Acetate Rayon						
Class 1	27.5	25.0	23.4	72.5	28.3	79.1
Class 2	29.2	36.6	36.6	27.5	46.7	19.2
Class 3	20.8	19.2	22.5	0.0	19.2	1.7
Class 4	22.5	19.2	17.5	0.0	5.8	0.0
Other Rayon Mixtures						
Class 1	32.4	44.2	50.0	88.3	17.6	58.9
Class 2	17.6	35.3	20.7	11.7	47.1	41.1
Class 3	20.6	8.8	17.6	0.0	26.5	0.0
Class 4	29.4	11.7	11.7	0.0	8.8	0.0
All Fabrics						
Class 1	42.0	61.5	57.5	74.7	27.7	86.9
Class 2	26.1	22.5	22.9	24.1	50.1	12.8
Class 3	17.3	8.6	9.6	1.2	17.9	0.2
Class 4	14.6	7.4	10.0	0.0	4.3	0.1

sentative of the performance of dyes in the presence of natural perspiration, the run of mine of the fabrics in the study show a somewhat high vulnerability to this particular agent.

Results of the Crocking Test

In the dry and wet crocking tests, the fabrics as a whole showed 74.7 and 27.7 per cent, respectively, in the highest class of colorfastness. Acetate fabrics had 100 per cent of their number in Class 1 in the dry test and 81.8 per cent in Class 1 in the wet crocking test. Other fabrics ranged according to the percentages shown in table 3, with rayon mixtures other than viscose and acetate having but 17.6 and cotton but 17.1 per cent in the highest class in the wet crocking test.

Whereas, the dry crocking test is intended to represent the propensity of a dyed fabric to rub off onto another surface in the dry condition, the wet crocking test represents the rubbing off of the fabric in a wet condition onto another surface. It was noted that a much higher percentage of the dyed fabrics showed a good response to the dry than to the wet tests.

Results of the Pressing Test

It will be noted from a glance at table 3 that a total of 86.9 per cent of all of the 1000 fabrics in the study showed no fading during pressing, under the conditions of the test, with the values ranging from 100 per cent of the acetate to 58.9 per cent of the rayon mixtures in the highest class according to the laboratory test.

Summary of Part I

This is a progress report on 1000 miscellaneous fabrics, distributed among eight fiber-content groups, which were studied in the Northeastern Regional Experiment Station Co-operative Textile Project.

All fabrics, regardless of fiber content, had an over-all average of 65.9 per cent in the highest class of performance with respect to the following 10 colorfastness tests: laundering (cotton), laundering (rayon), dry cleaning by the dry method, dry cleaning by the wet method, light, artificial acid perspiration, artificial alkaline perspiration, crocking dry, crocking wet, and pressing.

The poorest average responses to the tests were found with the wet crocking and light tests. Other tests gave progressively better results in this order: dry cleaning (wet); perspiration, alkaline; laundering (rayon); perspiration, acid; laundering (cotton); crocking (dry); pressing; dry cleaning (dry) (which showed the best response of any of the tests).

The study clearly indicates the need for colorfastness standards for all types of wearing-apparel fabrics, with labeling to show the consumer the kind of colorfastness performance to be expected in a certain fabric.

PART II

Predictive Value of Present Laboratory Tests for Colorfastness Performance of Wearing-Apparel Fabrics

Of the 1000 garments made of the fabrics discussed in Part I of the report, 211 had been discarded by their owners and returned to the laboratory for inspection with sufficient consumer data for making comparisons with the laboratory tests. These form the basis for this part of the report, in which the second objective of the study is considered, namely, the value of the present laboratory tests for colorfastness of textile fabrics in predicting the actual performance of the fabrics during wear.

Methods of the Study

Fiber Content of Fabrics in Returned Garments

The distribution of the fabrics in the returned garments with respect to fiber content was as follows: cotton, 81; wool, 15; wool

mixtures, 15; silk, 27; viscose, 46; viscose and acetate, 20; other rayon mixtures, 7.

TABLE 4

A comparison of laboratory and wear performance of 211 garments with respect to colorfastness

TEST	FABRICS SHOWING LABORATORY TEST SAME AS WEAR PERFORMANCE	LABORATORY COLORFASTNESS PERFORMANCE TESTS	
		More Rigorous Than Wear Tests	Less Rigorous Than Wear Tests
	per cent	*per cent*	*per cent*
Laundering			
Of cotton and linen			
Test I	12.5	1.3	86.2
Test III	13.7	1.3	85.0
Test IV	18.7	6.3	75.0
Of fabrics other than cotton and linen	32.4	11.8	55.8
Dry cleaning			
Dry method	78.5	1.8	19.7
Wet method	35.7	50.0	14.3
Light	49.0	12.5	38.5
Perspiration			
Acid	59.5	21.0	19.5
Alkaline	56.0	25.0	19.0
Crocking			
Dry method	73.8	26.2	0.0
Wet method	25.1	74.9	0.0
Pressing			
Dry method	85.5	14.0	0.5

Comparison of Laboratory and Wear Results

The comparison of laboratory tests and wearing performance of the 211 garments with respect to colorfastness is given in table 4 and in the chart in terms of the percentage of the fabrics which gave the same wearing performance as laboratory tests, the percentage of laboratory colorfastness performance tests which proved to be more rigorous than the wearing tests, and the percentage of laboratory colorfastness tests which were less rigorous than wearing performance.

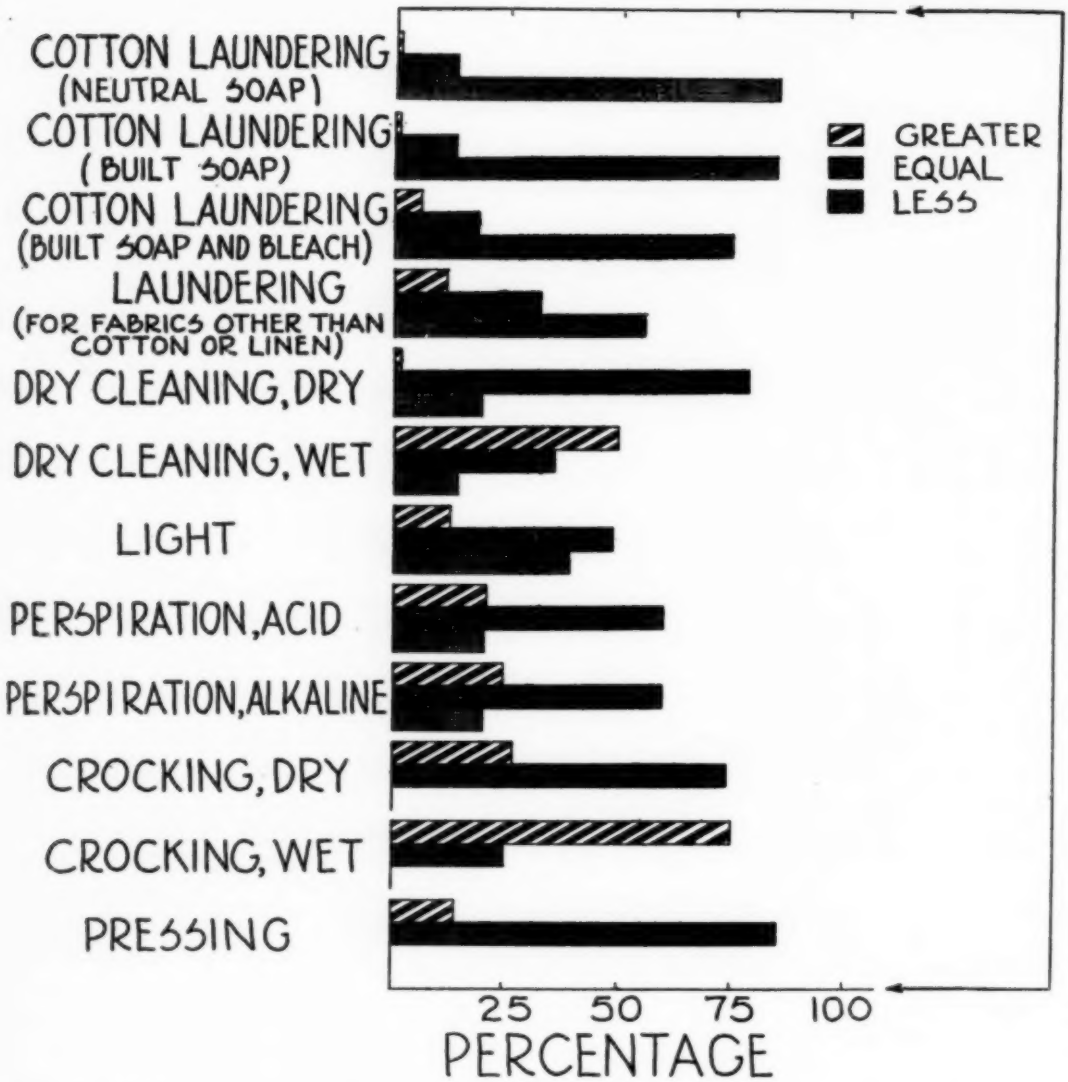
Of the returned fabrics, 34 were among those which were given the laboratory laundering test for textile fabrics other than cotton or linen (CS 59-41, Section IX); and these, as nearly as could be judged by the consumers' records, had been given a mild laundering treatment at home with neutral soap or soap flakes. Of the remainder of the fabrics, 80 cotton fabrics were laboratory tested by the three cotton methods described in Part I of this report, while 56 were dry-cleaned both in the laboratory and during consumer use. The remaining 41 fabrics were given more than one kind of cleaning treatment during use, such as dry cleaning alternated with laundering, or some method of freshening during use which was not adequately described.

Because of the nature of the garment, only 179 of the fabrics could be judged as to their crocking propensities during wear, and only 200 of the garments could be judged as to their perspiration performance during wearing.

In judging the colorfastness of a garment returned to the laboratory after it was no longer regarded as wearable by the owner, it was difficult to differentiate between the various agencies causing the color loss, since a combination of agencies might have caused greater loss in use than the sum total of each of the agencies acting separately.

Nevertheless, as good an evaluation as possible was made by a careful scrutiny of the garment. If the exposed areas showed a greater degree of fading than did the concealed regions, such as the undersurface of hems or the protected part of seams, the additional color loss in these areas was attributed to light fading, since obviously a garment is laundered or dry-cleaned as a whole. Greater loss of color under the arms or in other areas having considerable exposure to perspiration, such as the section of the garment across the shoulders above the underwear, was attributed to loss of color from perspiration.

Crocking results had to be recorded from the consumers' reports, unless there was some light-colored portion of the garment upon which crocking was evident. Fading during pressing was based on the consumers' record.



COMPARISON OF PERCENTAGES OF GARMENTS IN WHICH THE COLORFASTNESS IN THE LABORATORY TEST WAS EQUAL TO, GREATER THAN, OR LESS THAN THE PERFORMANCE DURING WEAR

Findings

Laundering

Regardless of whether a cotton garment while in use was laundered in a commercial plant or at home, with neutral or built soap, with or without bleach, or by alternative methods through its entire history of use, the results of each of the three laboratory laundry tests for cotton or linen were compared separately with all of the cotton fabrics for results during wear.

The test with neutral soap at a low temperature (105°F) gave an accurate prediction in only 12.5 per cent of the cases, with 1.3 per cent of the fabrics showing a greater color loss in the laboratory, and 86.2 per cent a lesser color loss than was shown when the fabrics were laundered during use.

The laboratory test with built soap at a

higher temperature made accurate predictions in 13.7 per cent of the cases, and that involving both built soap and a one per cent solution of chlorine bleach, in 18.7 per cent of the cases. In the last two tests, as in the test with neutral soap, the laboratory tests were more rigorous than wear in only a very small percentage of the cases, the results of wear in the vast majority of instances being more drastic with respect to color loss than was the case with the laboratory tests.

The experience of the authors of this report would indicate that the difficulty in this case is not with technique of the test but with the fact that the test is given but once, whereas, few launderable garments are laundered but once. The garments in this study had from 3 to 120 launderings. The following summarizes the number of washings given to the cotton fabrics among the returned garments in this study: 10.2 per cent were laundered less than 10 times; 43.5 per cent, from 10 to 29; 24.6 per cent, from 30 to 59; 15.9 per cent, from 60 to 89; and 5.8 per cent, 90 times or more.

The laundering test for fabrics other than cotton or linen accurately predicted laundry performance during wear in 32.4 per cent of the cases, with 11.8 per cent of the fabrics giving higher and 55.8 per cent lower color loss during the laboratory test than during the wear test. Again, more than one laundering laboratory treatment is indicated as desirable if proper predictions are to be made concerning the performance of the fabric in laundering during use.

The special laundering test for rayons and silks revealed susceptibility to the same type of error as the cotton laundering tests.

Dry Cleaning

The predictive value of the laboratory test for dry cleaning was higher for the dry than for the wet dry-cleaning test. In the case of cleaning by the dry method, the test erred in being somewhat too mild; in the wet cleaning, in being somewhat too rigorous.

It should be noted that there was no method of determining whether the garment in use was dry cleaned solely by the dry method, or whether it was dry cleaned by the wet method at least some of the time. The results of dry cleaning during wear were therefore compared separately with each of the two kinds of laboratory dry-cleaning tests so as to arrive at the percentages.

Unpublished data from the textile laboratory at the Pennsylvania State College indicate that an average of the two dry-cleaning tests gives results of better predictive value than either test alone.

Light

A total of 49 per cent of the fabrics given a 40-hour laboratory exposure in the Fade-Ometer were rated as having the same degree of light fading as that caused by actual use. Only 12.5 per cent did not fade in use as much as was predicted for them on the basis of the laboratory test, whereas 38.5 per cent showed a greater degree of fading in use than in the laboratory.

The 40-hour test would appear, therefore, not to be sufficiently rigorous if it is desired to test wearing-apparel fabrics accurately for their colorfastness performance with respect to light. This is particularly true of fabrics used for garments which are exposed to considerable sunlight, such as sports apparel and house dresses worn for outdoor work such as gardening.

Perspiration

In the case of artificial acid perspiration, 59.5 per cent of the color damage was predicted accurately; 56 per cent of the color loss from alkaline perspiration matched perspiration damage in the worn-out garments. Cases in which the laboratory perspiration tests were too mild to give accurate use predictions were not very different from those in which tests were too rigorous.

The laboratory tests of too mild a character would quite obviously be more serious from the consumer's point of view than would those which are too rigorous, since she wants to be warned of all potential causes of color

damage, some of which may be prevented by careful treatment.

Crocking

The crocking test was higher in its predictive value with the dry than with the wet test, the percentages being 73.8 and 25.1 per cent, respectively. This test was somewhat more rigorous than was required to predict the performance during wear. One thing, however, should be noted in this connection: the fabric might have crocked off onto skin or underwear without the owner of the garment having recorded this on the wear data sheet.

Pressing

Very few of the fabrics failed to receive a high rating for dry pressing. Moreover, there was a high percentage of agreement between laboratory tests and wear in this case.

Summary of Part II

The predictive value of the 10 laboratory tests for colorfastness of textile fabrics was studied by comparing the colorfastness of the fabrics as shown in the test with that found after actual wear.

Many of the tests failed to predict actual wear performance in any but a small percentage of the cases, the error being more frequently on the side of the test's being too mild than on the side of its being too rigorous.

The need for more rigorous tolerances in applying the tests and in interpreting the results was indicated. In the case of the test for colorfastness to light, as an example, the method of conducting the test was satisfactory, but a longer period of light exposure seemed desirable.

In the case of the laundering test, a number of successive applications of the present test, or an accelerated one-wash test giving results equivalent to a multiple-washing test rather than the present use of one test, seems desirable if the test is to predict colorfastness of fabrics in consumer use, where repeated launderings are applied.

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2. National Bureau of Standards. Woven textile fabrics testing and reporting. *Third edition.* Commercial Standard CS 59-41 (1941), 35 pp.
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New Books . . .

Nutrition and Chemical Growth in Childhood. Vol. I. Evaluation. By ICIE G. MACY. Springfield, Illinois: Charles C. Thomas, 1942, 432 pp., $5.

This first of two volumes "presenting results of ten years of intensive clinical and biochemical investigations of normal children" by the author and her associates is designed as a reference text for research workers in nutrition and for physicians.

It is attractively bound, contains 66 well-chosen illustrations and 122 tables. From beginning to end this unique book offers a wealth of material for those interested in nutrition research.

It will serve as a much-needed handbook for metabolic studies including approved techniques for the chemical, hematochemical, and polarographic methods involved. In keeping with the modern trend, the last chapter deals with the compilation and treatment of data from the statistical standpoint. The book closes with an extensive and valuable list of the references cited and of the papers published from the nutrition research laboratories with which the author has been connected.

Perhaps it is enough to say, "Dr. Macy wrote this book," for no one else is so well qualified to evaluate nutrition and chemical growth in children. —MARTHA S. PITTMAN, *head, department of food economics and nutrition, Kansas State College.*

Heredity, Food, and Environment in the Nutrition of Infants and Children. By GEORGE DOW SCOTT. Boston: Chapman & Grimes, 1942, 778 pp., $5.

This unindexed book of 778 pages hardly lives up to the jacket's claim that it is "a complete guide to child nutrition" for parents, nurses, and social workers as well as the author's fellow physicians.

Many fields of knowledge more or less closely related to nutrition are touched on at considerable length. Nutritionists will not attempt to pass judgment on such sections as heredity, diagnosis, medicine, except perhaps to wish for a more concise treatment of the subject matter. They will, however, try and find wanting the sections on food and nutrition.

There are many indications that the text was written originally some years ago and has not been redrafted to keep pace with recent rapid developments in nutritional knowledge. There is no mention, for example, of either riboflavin or niacin; pellagra is attributed to a deficiency in proteins of high biological value; and foods are rated as sources of vitamins according to the 1932 edition of Sherman's *Chemistry of Food and Nutrition.*—MARJORIE M. HESELTINE, *nutritionist, Washington, D. C.*

Nutrition and Diet Therapy: A Textbook of Dietetics. By FAIRFAX T. PROUDFIT. *Eighth edition.* New York: The Macmillan Company, 1942, 1069 pp., $3.25.

This well-illustrated book, organized to follow the Unit Plan of the NLNE curriculum, is designed as a text for nurses but will also find use as a valued reference for both home economics and medical students. This completely revised edition now includes unit projects as well as the familiar chapter summaries. A section which includes nutrition in pregnancy and lactation and the feeding of children of different ages has been added. Other sections are on normal nutrition, diet therapy, and recipes. There is an appendix, the food tables of which include many processed foods and new figures for vitamin content.—ELLA JANE MEILLER, *dietetics teacher, Kansas State College.*

Just for Two: A Handbook of Cookery for the Small Household. By LILY HAXWORTH WALLACE. New York: M. Barrows & Company, Inc., 1942, 311 pp., $2.

A book for the bride, for the business girl, or for any family of two. Although the book is primarily a recipe book, both the novice and the experienced homemaker will obtain valuable information from the chapters on "Planning Menus for a Balanced Diet," "Marketing Tips," and "Measurements and Methods."

Interesting and usable menus are given, although those for dinner include surprisingly few salads. The recipes are given in thirteen chapters under such headings as breads, soups, vegetables. In addition to the recipes, each chapter contains some general discussion of the foods being considered.

The classification of "tender" cuts of meat as "choice" and of "less tender" cuts as "less choice" would seem a questionable division. The recommendation that most vegetables be cooked either

in an abundance of water or in water to cover is hardly in keeping with the present-day emphasis upon the conservation of nutritive value.

On the whole, the author succeeds in writing not only a "helpful and interesting" book which could very well be the beginner's guide but one which could also be a desirable addition to any collection of cookbooks for the small family.—GLADYS E. VAIL, *associate professor of food economics and nutrition, Kansas State College.*

Food Control in Great Britain. Studies and Reports, Series B (Economic Conditions), No. 35. International Labour Office. Washington, D. C.: International Labour Office, 1942, 272 pp., $1.25.

This book is an analysis of the problems of production, distribution, and consumption of food in Great Britain during the present war and the measures which have been adopted to solve those problems. The last section of the book deals with the postwar significance of this experiment in state control. Much of the book will be of interest only to those concerned with the administration of food policy.—H. P. H.

It Runs in the Family. By JAMES LEE ELLENWOOD. New York: Charles Scribner's Sons, 1942, 236 pp., $2.

Underneath a breezy, humorous style this book presents many sound observations on family life and workable suggestions for living together during those tempestuous years of adolescence which some families dread.

In this family of four with Grandma and the dog as important characters in the drama and Mom and Pop breathlessly keeping up with changing scenes, the theme seems to be "What next? All we know is that it runs in the family. That's why we need to be fine and friendly, unafraid and creative, with knowledge of the rules and with infinite personal regard, one for another."

Written by a father about a real family, people of all ages will chuckle over this book and fathers especially will be glad to have a spokesman in the flood of literature which sometimes acts as though only mothers were parents.

Characterized by frankness and honesty and a willingness to look at all sides of a question; the reality of arguments, interruptions, adjustments, and upsets in wholesome family living; the common areas of argument, beginning with A and going through Z; the necessity of each family's finding its own home-brewed solutions to its own problems; the difference between rules and attitudes; the dangers of dictators and the desirability of cooperators, whatever their ages; how to have both freedom and responsibility are all discussed so that the points made will be remembered for many a day. Clever line drawings add to the gayety of this most enjoyable and worth-while book.—ESTHER MCGINNIS, *professor of family life education, Buffalo State Teachers College.*

Science Education in Consumer Buying. By GEORGE L. BUSH. New York: Bureau of Publications, Teachers College, Columbia University, 1941, 228 pp., $2.35.

The author states as his aim in writing this book that of "indicating, describing, and making a critical appraisal of information sources" for material on consumer education. To this end, he has drawn heavily upon previously published books and reports and has quoted extensively therefrom to prove or illustrate various points. The implication is made throughout that science education is the panacea for all ills of consumer buying.

There is little new or stimulating in the book. Practically none of the literature cited is later than 1939 and even though parts of the text were written as late as April 1941, some of the information was several months out-of-date at that time. For example, the Wool Products Labeling Act of 1939 was passed by Congress in October 1940 and became effective nine months later (July 1941); however, no mention of this law is made. Instead, the discussion of wool labeling hinges around the optional labeling regulations promulgated in a Commercial Standard in 1938.

No mention has been made of the National Consumer-Retailer Council and its work on consumer education and informative labeling, even though this organization has been in existence for several years. Other similar omissions and some inaccuracies lead one to conclude that the author is not familiar with all phases of the consumer education program.—BESS V. MORRISON, *associate home economics specialist, U. S. Bureau of Home Economics.*

American Planning and Civic Annual. Edited by HARLEAN JAMES. Washington, D. C.: American Planning and Civic Association, 1941, 292 pp., $3.

The subtitle of the book indicates its contents: "A record of recent civic advance in the fields of

planning, parks, housing, and neighborhood improvement, including the principal papers delivered at the National Conference on Planning, held at Philadelphia, Pennsylvania, May 12–14, 1941, and the Mississippi Valley meeting of the National Conference on State Parks, held in Père Marquette State Park in Illinois, June 2–4, 1941."

Very good reading for those wishing to get informed on housing problems.—H. P. H.

Annual Review of Biochemistry. Volume XI. By JAMES MURRAY LUCK, *editor*, and JAMES H. C. SMITH, *associate editor*. Stanford University, California: Stanford University Press, 1942, 736 pp., $5.

Twenty-six papers are published in this volume. Among them are: "The Water-Soluble Vitamins" by Paul György, "The Chemistry of the Proteins and Amino Acids" by J. T. Edsall, "Immunochemistry" by J. R. Marrack, "The Metabolism of Proteins and Amino Acids" by H. H. Mitchell, and "The Chemistry of the Hormones" by J. J. Pfiffner and O. Kamm.—H. P. H.

The Food Garden. By EDNA BLAIR; illustrated by LAURENCE BLAIR. New York: The Macmillan Company, 1942, 148 pp., $2.

Those who had their urge to do gardening belatedly this year and who as a result were rewarded with poor crops may find announcement of this attractive book timely.

The fall soil conditioning is discussed in Chapter 1. Other chapters take up vegetables in general, greens for cooking, salad vegetables, herbs, fruits and berries, and preserving and storing garden crops. Garden pests and ways to fight them are discussed.—H. P. H.

Herbs: Their Culture and Uses. By ROSETTA E. CLARKSON. New York: The Macmillan Company, 1942, 226 pp., $2.75.

A comprehensive book on herbs is this—and one written in interesting style by one who loves her subject. The author's graduate work at Columbia University led her to extensive research in sixteenth century literature in England, and the frequent mention of herbs in literature led to her hobby of collecting old herbals and of growing herbs in her own garden on the Connecticut coast.

She discusses herb arrangements in the garden; the culinary garden; how to use herbs in cooking and in making teas; fragrant herb gardens; how to make herb vinegars, potpourris, and other herb products; and how to market the herbs. She lists herbs that will grow in shade, in dry places, in moist spots; those that are good for low garden edgings, for crevices, for hedges; those useful for flower arrangements and for a dozen other purposes.—H. P. H.

Drexel Institute of Technology, 1891–1941. A Memorial History. By EDWARD D. MCDONALD and EDWARD M. HINTON. Philadelphia: Drexel Institute of Technology, 1942, 336 pp., $3.

Twenty-two pages in this book are devoted to the history of the Institute's home economics work, which dates back to February 1892, when President MacAlister reported the opening of four courses for women: chemistry with 39 students, cookery with 56, dressmaking with 46, and millinery with 31.—H. P. H.

Red Cross Home Nursing. By LONA L. TROTT. Philadelphia: The Blakiston Company, 1942, 431 pp., cloth $1.10, paper $0.60.

This official Red Cross manual on home nursing aims to help homemakers and potential homemakers to meet personal and family health problems in their own homes and does not attempt to train workers for hospitals or homes.

Two members of the AHEA shared in its preparation: Melva B. Bakkie, director of the Red Cross nutrition service; Edna P. Amidon, chief of the home economics education service, U. S. Office of Education.—H. P. H.

This Is Your War. By MARQUIS W. CHILDS. Boston: Little, Brown & Company, 1942, 200 pp., $1.50.

This book by the author of *Sweden—the Middle Way* is a statement of what every person in the USA has to do to win the war. Inspirational and very readable.—H. P. H.

Abstracts . . .

CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

Contributed by Ruth Staples and Leland H. Stott, University of Nebraska, and Mrs. Mildred Thurow Tate, Virginia Polytechnic Institute

Washington trains volunteers for day care of children, A. C. MENDHAM. *Child* **6,** No. 11 (May 1942), pp. 286–288.

Thirty-five students had completed the lectures, the first part of the first training course for volunteers in child care given in the District of Columbia, and were doing practice teaching under guidance. The Council of Social Agencies with other interested community groups planned for training nursery-school aides. Prospective helpers were selected through interviews with professionally trained social workers aided by trained nursery school specialists. The course consists of 10 lecture discussions by competent specialists, a series of field trips, and 50 hours of practice teaching in actual nursery school situations.—M. T. T.

Factors in planning a community day-care program, E. O. LUNDBERG. *Child* **6,** No. 11 (May 1942), pp. 281–285.

To make available services of women actually needed for war production or other essential work is a major objective of day-care programs. A study of industrial needs of the area, available labor supply, and employment policy, together with a study of the needs of the women and children should precede establishment of the care centers.

Not all employment of mothers necessitates full-time care. Existing agencies can sometimes provide adequately for children. Counseling service to help co-operating parents and to help families realize that their children need to be safeguarded is recommended.

From English experience come the suggestions that it is uneconomical (except in unusual circumstances) for a mother of more than one or two children to be employed if her children must be cared for in a day center; and that arranging reasonable working hours, say from 9:00 to 4:30 o'clock, is better both for the mental and physical health of mothers and children.—M. T. T.

Case work in a day nursery, A. L. VOILAND. *Family* **23,** No. 3 (May 1942), pp. 97–102.

The Greenwich Center for Child and Family Service is described as to type of agency, the plan for the day nursery, the approach to parents of children in the nursery, and the work with the child in the nursery. Certain problems inherent in the merging of a family agency and a child placement agency are discussed.—M. T. T.

At home in the world, P. S. BUCK. *Marriage & Family Living* **4,** No. 1 (Feb. 1942), pp. 1–4.

The author believes that "the problems of the world must first be met in the home before we will have men and women sufficiently educated for the world. The child prepared in the home, through all the life of the home, for the life of the world beyond steps forward a self-confident and integrated creature."

She believes that men and women are frustrated, discontented, and afraid in life because they have never been prepared emotionally to be anything but children. Hence, the home should not be a "place of refuge," but rather a part of the world where world problems are faced realistically and solved.

Parents should, then, be actively interested in problems outside the home. "They should not live solely for the child but live a life of reality with the child."—L. H. S.

A study of some poorly adjusted families, R. R. WILLOUGHBY. *Am. Sociol. Rev.* **7,** No. 1 (Feb. 1942), pp. 47–58.

At the suggestion of the Family Welfare Society of Providence, a study of the case histories of 45 "maladjusted" and 22 "adjusted" families was made. All of both groups had been accepted for care under the general policy of the society.

"Maladjustment" was taken to mean "a condition as seen by a case worker" which consisted of various combinations and degrees of the following: too great concern; expectation that things should be done for one; serious entertainment of obviously unrealistic plans; inability to share; inability to love another; lack of co-operation; presence of fearful inhibitory attitudes; inability to relax, to play, to get joy from living; inability to come to terms

with differences in family and cultural patterns; and lack of planfulness and of ability to carry through.

Maladjustment, according to the findings, did not seem to consist of worried or anxious behavior. Aggressive or hostile behavior, however, did seem to be a fairly strong component. The beaten or collapse types of reaction also seemed to enter the picture. The author believes that some of these were results of long deprivation and the failure of attempts to adjust.

A search for background factors associated with the condition of maladjustment showed that the maladjusted families had substantially less schooling and less responsible and skilled jobs. The author believes that this lack of schooling is related to the lack of intelligence.

Cultural conflicts between European background and American culture, conflict within the family, and sex unconventionality were also somewhat more prevalent among the maladjusted families.

On the other hand, no differences were found in incidence of disabling medical condition or poor childhood backgrounds, such as neglect, abuse, broken homes. "Everything considered, the evidence points to inferior original endowment and traumatic conditions of life in the postschool years as most significant of the factors making for inadequate social behavior patterns."—L. H. S.

Basis of the delinquent acts of well-to-do and poor children, R. FEINER. *Smith Coll. Studies Soc. Work* **12,** No. 3 (March 1942), pp. 302–328.

Using the files of a child guidance clinic as source material, a comparative study was made of a group of "pairs" of delinquent children. Each member of a pair was matched as nearly as possible for age, sex, intelligence, delinquent acts, and other pertinent factors, save that one was from a well-to-do and the other from a poor home.

The results indicate that the child's motives for his delinquent behavior and the outlook for the treatment are very similar, regardless of the economic status of the family. The children from the well-to-do homes were overprotected and held up to high standards and consequently showed extreme reactions to stresses which were unfamiliar to them. The children from the poor homes showed definitely the added strains of their unfavorable environment.—R. S.

Traits predictive of the successful outcome of unmarried mothers' plans to keep their children, J. S. HOSMER. *Smith Coll. Studies Soc. Work* **12,** No. 3 (March 1942), pp. 263–301.

This study was undertaken in order to determine what factors are predictive of whether an unmarried mother can satisfactorily make a home for her child.

Twenty-six mothers who had kept their children and for whom there was adequate information at the time of the child's birth were selected from the case histories of a social agency as subjects for further study. A personal interview with these mothers was conducted six years after the children were born in order to determine both the mother's and child's general welfare and personal and social adjustment.

The success of a mother's plan to keep her child with her seems to depend primarily on three factors: the girl's personal adjustment prior to her pregnancy, the psychological healthiness of her home conditions, and the degree of maturity in her attitude toward her pregnancy.—R. S.

Ideals for family life after the war, E. C. LINDEMAN. *Marriage & Family Living* **4,** No. 1 (Feb. 1942), pp. 7–8.

Dr. Lindeman looks forward to changes, through the work of those interested in the improvement of family life, in four areas: (1) A shift from legalism to education in our attempts to make home life more stable. "Nothing save affection, understanding, and insight can sustain a successful family." The author maintains that these qualities can be obtained not by law, but only by education.

(2) Family-centered economic planning which will insure decent living conditions, including decent housing, for all.

(3) An emphasis on education "in the subtile arts of human relationships" which will encourage stability and security founded upon faith, confidence, and insight. Both parents and children need training in at least the elementary foundations of mental hygiene.

(4) The realization of the family as a resource for recreation. The author looks forward with confidence to the time when many of the tensions of modern life will be absorbed in the fun-loving family circle.—L. H. S.

Wartime problems of family security, H. R. JETER. *Family* **23,** No. 3 (May 1942), pp. 83–91.

Wartime problems and measures that are now being taken or contemplated to meet these prob-

lems are here presented. It is pointed out that family security is family welfare, that the problems of family security in wartime are much the same as those family agencies have long been facing, such as economic hardships, emotional strains, maladjusted children, family separation, and the threat of mental breakdown.

Some additional problems have come upon us since entry into the war, such as wartime unemployment, aliens, enemy action or threatened action, need of help for families of servicemen, selection and rejection of men for the armed forces, increased industrial activity, increased cost of living, geographical dislocation, and community organization. In handling these new problems it is suggested that existing agencies be used before new ones are created, that federal, state, and local relationships be observed in organizing social services. Questions needing consideration are: how to divide new responsibilities between governmental and voluntary agencies, how to provide necessary social services rather than merely give financial assistance.—M. T. T.

The effect of selective service on selectees and their families, S. JOHNSON. *Family* **23,** No. 5 (July 1942), pp. 173–176.

Miss Johnson's experience in family case-work service to men in the armed forces and their families leads her to believe that today the only difference between the selectee and his fellow soldier lies in the fact that the selectee had no choice in the matter. He may accept what has happened, but he did not reach out for service.

For many selectees and their families, entering the Army has been the most drastic change that has yet occurred in their lives. The basic principles of case work with these families is the same as with civilian cases. The case worker must be aware of the significance of giving up much with no opportunity for choice, of feeling one's identity gone, of sudden loss of income or status, of fear of injury or death; above all, she must have an understanding of the pain that can be created by separation. These disturbances may not be openly presented, and it is the case worker's challenge to sense the real trouble for the family of each serviceman. —M. T. T.

Hospital standards for the care of crippled children, A. L. VAN HORN and A. J. LESSER. *Child* **6,** No. 12 (June 1942), pp. 308–310.

The minimum standards for hospital care for crippled children, as set up by the Children's Bureau Advisory Committee of Services for Crippled Children, are presented and discussed. These standards have been adopted by most of the state agencies for the selection of hospitals for crippled children used under the state program.

Some state agencies have recognized the need for additional requirements. The writers hope that most states will set up standards above the minimum recommended by the Children's Bureau Advisory Committee. Agencies must be encouraged to maintain standards during this emergency in spite of shortages of personnel and equipment.

The urgent need for a better understanding between public agencies and hospital authorities of their mutual interests and of their responsibilities to the state and community which they serve were pointed out.—M. T. T.

Children of the Americas, E. S. ENOCHS. *Survey Midmthly.* **88,** No. 6 (June 1942), pp. 184–187.

This is a report of the eighth Pan American Child Congress held in Washington in May 1942. Considerable progress in work for children since the seventh Pan American Child Congress in Mexico in 1935 was reported: in social security and labor legislation, maternal and child health services, strengthened school programs and better trained personnel; in the exchange of experts between countries and in fellowships for study in technical fields. Delegates painted a somber picture, however, of the effect of the war on these gains.

The Congress urged the American International Institute for the Protection of Childhood to study the nutrition problems of the children of the Americas and ways of protecting children in countries at war.

The Congress adopted a committee report containing a "Declaration of Opportunities for Children" and outlined provisions for national and international action as well as local action basic to the protection of children.—M. T. T.

FAMILY ECONOMICS

Contributed by Maryland Y. Pennell of the Family Economics Division, U. S. Bureau of Home Economics

Price ceilings and wartime control over the American economy, C. A. R. WARDWELL and G. J. MATCHETT. *Survey Current Bus.* **22,** No. 6 (June 1942), pp. 19–26.

Price control and the reduction of the unit volume of consumer goods will bring profound changes in the distributive trades. The variety of goods offered for sale will diminish; some commodities will disappear from the market completely. Fewer services will be offered in connection with the sale of commodities.

While many of the major cost-of-living prices may be stabilized, the level of living is bound to fall. Civilian production will be severely curtailed. Accumulated inventories will be drawn down.

In addition, the authors think there is likely to be considerable deterioration in the quality of commodities and some further advance in commodity prices. Such price advances as do occur, however, will be at a slower rate.

Price control requires standards, L. HENDERSON. *Ind. Stand.* **13,** No. 6 (June 1942), pp. 146–148.

OPA is fully cognizant of the fact that a price ceiling alone will not necessarily have the effect of preventing "real" price spiraling in all cases. If, for example, a ceiling price were set on a commodity and no attempt were made to define that commodity, variations and substitutions could be instituted which would decrease ultimate serviceability through quality deterioration.

The standards work of OPA may be summarized as follows:

1. Development of quality definitions (based either on construction or performance) of commodities in order to peg price to quality
2. Development of informative labeling as a means of controlling quality to enable the consumer to make her own comparisons of price-quality relationship and to act as a material aid in the enforcement of the regulation
3. Development of basic standards for "utility" or "victory" models as shortages in particular fields necessitate such a step
4. Analysis of consumer complaints of violation of the ceiling whenever the alleged violation involves the question of quality deterioration
5. Consultation on the technical problems which will arise as it becomes necessary to ration commodities
6. Informing the consuming public, explaining the importance of the various technical aspects of price control
7. Educating the consumer to buy wisely and according to need and, above all, to care for and conserve whatever she has

How use of scarce materials affected civilian goods in 1941, W. HAYES. *Dun's Rev.* **50,** No. 2169 (May 1942), pp. 10–12, 33.

Shortages of materials figured large in the news of 1941. Priorities, critical lists, allocations, and other schemes for directing scarce materials into war uses were extensively employed. Yet by the end of the year the production of civilian goods in the United States had not been affected to any great extent.

The survey on which this conclusion is based collected information as of December 31, 1941, not only on the extent to which shortages were restricting production of civilian goods, but also on what concerns and industries were most affected and the ways in which such users had met the problem of scarcity.

Priorities and allocation, J. H. MARTIN. *Harvard Bus. Rev.* **20,** No. 4 (Summer 1942), pp. 406–414.

Included in this article is an outline of the War Production Board's system of priorities as it existed in May 1942 and an examination of the trend of the refinements and developments that must follow.

The author points out that smooth functioning by a particular company under the mass of priority orders and regulations is accomplished by (1) the recognition by the company that priorities are not just a temporary bothersome sideline, but a fundamental part of the economy in which the company must operate, and (2) an understanding by the industrialist that in meeting internal priorities problems in the system, change must be considered normal.

The growth of the present demand for a system of allocation of raw materials is the result not only of a reaction against the uncertainty and lack of

conformity with business practice which accompanied the use of preference ratings, but also of the recognition that the concept of priority of position in the manufacturing schedule cannot be carried over directly to the procurement of raw materials.

Population changes and their effects, H. L. DUNCOMBE, JR. *Harvard Bus. Rev.* **20,** No. 4 (Summer 1942), pp. 437–445.

The author examines some of the possible economic consequences of anticipated changes in the size and age composition of the population. Certain of the outstanding estimates of future populations together with the bases of projection are reviewed.

He concludes that (1) anticipated changes in age composition within the next 40 years will not materially affect average labor productivity, (2) the labor force may become less mobile as its average age rises, and (3) the changing age composition of the population will not have a serious effect on the present system of old-age insurance.

War finance and inflation, W. FELLNER. *Am. Econ. Rev.* **22,** No. 2, Part I (June 1942), pp. 235–254.

For the author the problem of avoiding inflation is the problem of how to cut the real consumption per capita to the deepest depression levels. To do this he recommends severe changes in our monetary and fiscal policies, especially in regard to expansionary defense financing.

He would not omit price control and rationing but warns that "measures directed at the aggregate income stream should provide the basic structure of a reasonable anti-inflation policy."

He is opposed to raising corporate income tax rates to the high level that he recommends for personal incomes. He believes that the risk that production would become inefficient if industrial efficiency remained entirely unrewarded is substantially greater than the risk that individuals would withhold their services on account of being taxed too heavily.

Family income and expenditures: Part I, Family income: Southeast region; farm series, D. S. BRADY, D. MONROE, M. PERRY, and M. R. PRATT. *U. S. Dept. Agr. Misc. Publ.* 462 (1941), 208 pp.

This volume presents facts as to family composition and the sources and amount of income of native white and Negro families of farm operators and sharecroppers living in the sections of the Southeast region surveyed by the Bureau of Home Economics as a part of the consumer purchases study.

The median income of white operator families differed widely among the five sections. In the self-sufficing section of North Carolina, the median net family income (money and nonmoney) was $611; in the eastern tobacco section, $1,587; in Georgia, $708; in South Carolina, $1,035; and in Mississippi, $1,091. Incomes of individual families ranged from less than $250 to many thousands.

The Negro operator and the sharecropper families were generally more fortunate in North Carolina than in the other three sections studied. The median income was $1,046 for the Negro operator group in North Carolina and between $490 and $598 in the other sections. The white sharecropper families had a median income of $1,023 in North Carolina and between $541 and $573 in the other sections. The Negro sharecroppers had median incomes between $409 and $423 except in North Carolina, where the median was $797.

Net money receipts from farming represented an important proportion of total income, comprising between 34 and 64 per cent of the total income of white operators in every section except western North Carolina, between 31 and 59 per cent for Negro operator families, and between 28 and 61 per cent for the white and Negro sharecropper groups.

Large families tended to have higher incomes than small families. In each section and for each race-tenure group, the family-type group having the highest median income was one in which there were five or more members.

Family expenditures for education, reading, recreation, and tobacco: Five regions; urban, village, farm series, D. MONROE, D. S. BRADY, M. Y. PENNELL, and M. H. COFFIN. *U. S. Dept. Agr. Misc. Publ.* 456 (1941), 208 pp.

Education, reading, recreation, and tobacco—the four consumption categories discussed in this report—occupy a position of secondary importance in the spending patterns of the groups of families at the various income levels in small cities, villages, and farm sections.

Illustrative of the small share of total value of consumption taken by these categories are figures for the villages of the Middle Atlantic and North

Central regions. Formal education accounted for less than 2 per cent of the total at all but one income level; reading for about 1 per cent at all levels; tobacco for 1 or 2 per cent; recreation for about 1 to 4 per cent at all levels save one.

Although more families had children in grade school than in high school, average outlays per family (based on all families) usually were much the same for the two types of schools. Thus, among the village group at the income level from $1,250 to $1,500 in the Middle Atlantic and North Central region total expenditures for formal education averaged $8.82 a family. Of this sum, $2.32 was for children in the grades; $2.27 for those in high school.

Newspapers took the largest share of reading outlays—75 per cent of the total spent by all families of the Middle Atlantic and North Central villages. Magazines and books took an increasing share of the total as income rose, accounting for more than half of all reading outlays at the level from $4,000 to $5,000.

Recreation expenditures generally exceeded those for formal education and for reading. Amounts spent in the Middle Atlantic and North Central villages averaged less than $1 a week at income levels below $1,750 and exceeded $3 a week only at the level from $4,000 to $5,000.

The relative number of families reporting expenditures for tobacco was generally independent of income level. Average amounts spent, however, tended to increase with income; families with more money to spend tended to buy tobacco products of more expensive kinds and in greater quantity.

Lengthened hours of employment for women and youth in Great Britain. *Mthly. Labor Rev.* **54,** No. 6 (June 1942), pp. 1331–1332.

For the second time in the present war the urgent need for production has led the British government to extend the hours of women and young persons beyond the limits fixed in the Factories Act of 1937, if the employer obtains the permission of the District inspector of factories.

Under the 1937 factory legislation the working hours of women and of boys between the ages of 14 and 18 years were limited to 9 per day and 48 per week. A schedule attached to the 1942 order establishes maximum hours of women and young persons aged 16 or over at 55 per week; those of children between 14 and 16 years of age at 48 hours.

Employment of women in the manufacture of small-arms ammunition. *U. S. Dept. Labor, Women's Bur. Bull.* No. 189–2 (1942), 11 pp.

This is one of a series of reports on women's present and possible employment in war industries, based on field surveys by Women's Bureau investigators since the early spring of 1941. A report on the actual employment of women in the first three months of 1942 will follow.

Measuring national income as affected by the war, M. GILBERT. *J. Am. Statist. Assocn.* **37,** No. 218 (June 1942), pp. 186–198.

In 1941 the national income reached 94.7 billion dollars as compared with the 1940 total of 77.3 billion dollars, the gain of over 17 billions constituting the largest annual increase in our history. This rise in national income is usually contrasted, in one form or another, with the change in the stimulus itself, that is, with the increase in armament outlays which rose from about 4 billion in 1940 to about 15 billion in 1941.

A real difficulty arises when an attempt is made to draw inferences from the national income and war expenditure aggregates regarding changes in the level of civilian goods output. Since the two aggregates are not fully comparable, the one cannot be subtracted from the other and yield a significant remainder.

The author adjusts the 1941 national income figure of 94.7 billion to an amount of nearly 120 billion which he labels "gross national product at market prices." He then subtracts the various sorts of nonconsumer purchases from current output so as to leave the desired residual of consumers' purchases.

Part-time employment of women in Great Britain. *Mthly. Labor Rev.* **54,** No. 5 (May 1942), pp. 1089–1091.

In co-operation with employees and employers, the British government is urging munitions and other industries to adopt schemes for part-time employment of women who, owing to family and other responsibilities, are unable to accept full-time employment. The supply of married women or women doing necessary household work comprises approximately 11,000,000 persons, and is the largest reserve for industry and home defense. As married women were exempt from the conscription law, the plan for maximum use of their services must be worked out on a voluntary basis and by direction.

TEXTILES AND CLOTHING

Contributed by Caroline Boyer, Margaret B. Hays, Viola C. Jelinek, Dorothea E. Klemme, Bess V. Morrison, Lillian Weidenhammer, and Marian Zametkin of the Division of Textiles and Clothing, U. S. Bureau of Home Economics

Nylon hosiery and perspiration. *J. Am. Med. Assocn.* **117,** No. 14 (Oct. 4, 1941), p. 1221.

Nylon is a synthetic resin and materials made from fibers of this substance do not absorb perspiration as do materials of natural fibers. Hose knit from nylon, however, have more open space than do silk stockings and consequently perspiration evaporates more rapidly from the skin under nylon than under silk.

Cases of dermatitis reported among nylon hose wearers have been traced to finishes used. Patch tests have proved that this resin is not a primary skin irritant. Nothing has been recorded in the literature to show that pains in the legs might be caused by wearing nylon hose.—D. E. K.

Clothing our Army. *Rayon Organon* **13,** No. 7 (June 1942), pp. 85–89.

This article summarizes the facts from official releases of the Army Quartermaster Corps as to clothing requirements of the Army.

The American Army today is without doubt the best clothed in the world. The average enlisted man during his first year needs approximately 55 articles of clothing, costing $154, of which $90 is the cost of original issue and $64 that for replacements and maintenance for one year. Under combat conditions this cost may be doubled or even tripled. In 1918 the enlisted man received only 33 clothing items, costing $80.

Today a man entering the Army is given clothing that will meet the requirements of all weather conditions. The life expectancy of various items of a soldier's uniform and equipment, based on the average conditions of wear in the continental United States, is shown in a table. A woolen coat lasts 33 months; woolen trousers, 14½ months; overcoat, 3 years; service shoes, 5 to 7 months; and woolen shirt, 6 months.

Huge quantities of raw textile fibers obviously are required to supply the large clothing needs of our Army. The raw wool requirements are discussed in some detail and are also shown in a table. It is estimated that in 1943 this country's domestic wool production will meet less than 60 per cent of the Army's requirements. Steps have already been taken by the War Production Board to conserve raw wool by drastically restricting its use in civilian products.—L. W.

Rainbow khaki for Britain. *Textile Colorist* **64,** No. 762 (June 1942), p. 284.

Five bright-hued wools are now blended to produce the earthy color of khaki first widely used in South Africa for the uniforms of the British Army. The correct proportions of blue, yellow, brown, red, and mauve wools are torn up by huge combs which separate, mix, and blend them. Gradually each color begins to lose its identity, just as the colors on a spinning top will merge into a misty gray. This blending process gives a more even and lasting result than dyeing the cloth in the piece as was done in the early days.

In peacetime the process was a secret belonging to the West Riding of Yorkshire, but today the West Riding shares its secret with other wool-spinning areas in the United Kingdom so that the whole industry can go ahead with the colossal job of putting the troops in uniform.—L. W.

Tufted bedspreads. *U. S. Testing League Bull.* No. G-5, 3 pp.

Tufting, a traditionally American art, dates back to early colonial days in New England when it took three years to complete a single spread. Today, candlewick spreads, tufted bathroom mats, hostess coats, and beach robes are machine made.

One machine can tuft as fast as 300 hands. The industry at Dalton, Georgia, employs 13,000 workers in 10 mills, using 30,000 bales of cotton yearly and averaging annual production at $25,000,000.

The candlewick spread is characterized by a series of individual dots or tufts. The chenille type has closely stitched surface yarns forming a continuous line of tufts when cut. Tufted spreads are popular due to the wide variety of background shades now available.

Candlewick and chenille spreads when vat dyed are highly resistant to action of sunlight and laundering and give long and satisfactory service. In dip-dyeing, the spread is dipped into the dye bath of direct or commercial colors. This method decreases the cost, but consumers are disappointed in the appearance of the spread after several

months of service. Shaking and brushing out after laundering will restore fluffiness to the tufts.—C. B.

Use redwood fiber instead of linters as mattress fillers. *Daily News Record*, No. 146 (June 23, 1942), p. 10.

Mattresses made from Sequoia felt are soon to be on the market. Sequoia felt is produced from redwood bark fiber, a wartime substitute for cotton linters, cotton picker, and cotton strips, by-products of the textile industry. This new-type felt is said to be resilient, odorless, vermin proof, and not absorbent of moisture.—B. V. M.

The importance of clothing in air conditioning, C. P. YAGLOU and A. MESSER. *J. Am. Med. Assocn.* **117,** No. 15 (Oct. 11, 1941), pp. 1261–1262.

Differences in the kind and amount of clothing worn by men and women are largely responsible for the disagreement as to what temperatures are comfortable. Women would find 72°F instead of 76°F a comfortable temperature in winter if they would wear clothes comparable in warmth to those worn by men. Conversely, in summer men would find 83°F satisfactory in hot weather rather than 76° or 80°F maintained in conditioned rooms at present. In this way the sharp contrast between the heat outdoors and the coolness inside air-conditioned places would be reduced. Likewise, the use of suitably warm clothes in winter and cool dress in summer by both men and women would simplify engineering problems and would cut down the cost of heating and cooling buildings. —D. E. K.

A study of oxygen absorption and catalase production during growth of *Chaetomium globosum* on cotton fiber and yarn, D. E. KLEMME. *J. Bact.* **43,** No. 2 (Feb. 1942), pp. 171–180.

Cotton fiber will deteriorate more readily when attacked by microorganisms than will cotton yarn made from the same fiber. This was indicated by measuring the amount of oxygen absorbed during the growth of *Chaetomium globosum* on fiber and yarn. The rate of absorption increased to a maximum at about the eleventh day, after which it decreased rapidly for about seven days and then more slowly for the next ten days.

The total amount of catalase produced by the *Chaetomium* during the incubation period was determined by reaction with hydrogen peroxide and subsequent titration. Catalase production also showed that growth was greater on fiber than on yarn and, hence, that fiber would deteriorate more readily than yarn.—M. Z.

Infra-red rays and their application to problems of the textile chemist, J. GRANT. *Textile Colorist* **64,** No. 761 (May 1942), pp. 213–215.

The use of infra-red rays in solving the problems of the textile colorist, in much the same ways as fluorescence analysis in ultra-violet light has been used, is being investigated.

Ultra-violet rays occupy the portion of the spectrum between the violet end of the visible range and x-rays; infra-red rays are just beyond the other end of the visible region and overlap the Hertzian or radio waves.

Infra-red rays are responsible for the heating effect of sunlight. A radiator is a very good source. These rays, like the ultra-violet, are invisible to the human eye, but unlike ultra-violet, cannot be converted into visible light through the medium of fluorescence. They can be "seen" indirectly, however, by a photographic method.

Their usefulness lies in their ability to penetrate the coarse structure of matter selectively in the way that x-rays penetrate the fine structure. When infra-red rays are directed onto substances such as fabrics, fibers, and dyestuffs, they scatter or penetrate according to the molecular structure of the material. This offers a means for identifying the substance.

In one type of application it is the extent of the absorption of the rays that yields the useful information. The technique involved is simple. In this way, for example, the bleeding of a dyed cloth that is not noticeable to ordinary eyesight becomes apparent. Different dyestuffs which appear identical to the unaided eye may be distinguished. Colors in a series of dyestuffs may be ranged for differences in coolness of the wearing apparel they dye, for the "cooler" colors will reflect more of the infra-red rays than the "warmer" ones.

Another application is the detection of stains in dark cloths as, for example, blood stains in a dark-colored serge. Any material in a fabric that affects its transparency to infra-red can be detected in this way.

The selective staining effects of certain dyestuffs that are opaque to infra-red rays make it possible to differentiate, under the microscope, between fibers and also between portions of fibers, which are indistinguishable in ordinary light.—L. W.

High voltage electricity harnessed to produce electrocoated fabrics. *Textile Research* **12,** No. 4 (Feb. 1942), pp. 2–7.

All-over-pile fabrics suitable for rugs and upholstery, or fabrics with designs appliqued on both sides, can be produced by electrocoating. The base fabric, treated with latex or other adhesive in the desired design, is passed between the positive and negative electrodes. Cut fibers of uniform length, carried on a conveyor, are drawn upward upon entering the electrical field and, when intercepted by the fabric, imbed themselves endwise in the adhesive. The final step is to harden and set the adhesive so that it will bind the fibers permanently.

Large-scale production scheduled to start last fall was postponed because of the military needs for rubber. Research continues, however.—M. B. H.

Fiberglas replacing strategic materials. *Chem. & Eng. News* **20,** No. 4 (Feb. 25, 1942), p. 304.

Fiberglas is rapidly replacing scarce strategic materials such as cork, aluminum, nonferrous asbestos, and mica. Cables insulated with glass fibers can be used without metal conduits in airplanes. Cork is replaced by fiberglas in certain types of low-temperature insulation. Fiberglas insulation is replacing asbestos in electric motors, generators, and transformers.

Electric tape woven from glass fibers shows greater tensile strength than similar tapes made of either cotton or asbestos. The use of fiberglas thermal and electrical insulation in a modern battleship makes possible a saving of approximately 60 tons.—V. C. J.

The water absorption by towels, P. LAROSE. *Am. Dyestuff Reptr.* **31,** No. 5 (March 2, 1942), pp. 105–108.

In measuring the water absorption of towels from the practical point of view of service, what one wants to know is the amount of water that can be absorbed by the towel and the ease or rapidity with which that water is absorbed. In use towels are generally applied against the object to be dried with a certain pressure. A method in which the towel or toweling is brought into contact with a wetted surface was thought to be worth investigation.

The method developed finally used two Alundum plates one on top of the other. These were kept wet by connecting the receptacle in which they were held with a constant-level reservoir containing distilled water. The apparatus is sketched.

A specimen two inches square was weighed under standard conditions, placed on the Alundum plates, and covered with a glass plate weighing 35 gm. Weighings of the wetted sample plus the glass plate were made at measured intervals of time. All tests were made under standard conditions of 65 per cent relative humidity and 70°F.

Some of the results obtained are shown by graphs in which the amount of water absorbed is plotted against time.

It appears that once the impurities, particularly waxes and oily matter, are removed either by laundering or solvent extraction, the absorption of the different test samples is practically the same. If the material is well scoured, the towel will absorb 150 per cent of its weight of water within 15 seconds. After it absorbs more than that weight of water it is useless for further drying. Therefore, this method of measuring water absorption would not be of use in comparing the value of one towel material with another, but rather as a means of judging the effectiveness or thoroughness of a scouring treatment.

The advantages of the pile in terry towels is that of adding weight and therefore absorbing material without increasing the size or stiffness of the towel. A plain woven fabric of the same weight and size would absorb just as much water, although probably a little more slowly, but it would have comparatively coarse yarns and would feel rough and stiff in comparison to the terry material.—L. W.

Directory of commercial testing and college research laboratories. *U. S. Dept. Commerce, Natl. Bur. Standards Misc. Publ.* M171 (1942), 63 pp.

The names of 244 commercial laboratories and 71 branch laboratories or offices, together with the addresses and a brief outline of the type of commodities or products tested, are listed. Included also are the 199 college laboratories which are used not only for purposes of instruction but also to a considerable extent for research.—B. V. M.

From the Editor's Basket...

Training to Be a HEWIB. "Preparation for the Business Field of Home Economics" is the title of an up-to-date, 24-page pamphlet directed at the young woman who is trying to decide upon a home economics career. Anyone who is doing counseling work will find it very helpful.

It is written in brisk, conversational style by Genevieve Callahan of San Francisco, foods consultant and journalist. It is completely rewritten from the first edition which was published in 1934 by the Home Economics in Business Group of the San Francisco Bay Region.

Miss Callahan conferred with business home economists in other parts of the nation in preparing this booklet so that it represents nationwide conditions, not just those on the west coast.

For sale from the AHEA, 620 Mills Building, Washington, D. C., for 25 cents.

High School Courses in Consumer Education. High on this year's program-of-work list of the AHEA department of elementary and secondary schools is publicizing "Some Principles of Consumer Education at the Secondary School Level," a 10-cent pamphlet of the U. S. Office of Education.

It is a report of a conference on consumer education held June 3, 4, and 5, 1940, in Washington, D. C. The chapters take up (1) assumptions upon which work should be based, (2) scope and minimum essentials of courses, (3) methods of organizing consumer education, (4) learning activities and teaching methods, (5) sources of materials and criteria for their evaluation, (6) pre-service and in-service training for the teacher.

One section also deals with bibliographies and sources of current information on consumer education.

Order from Superintendent of Documents, Washington, D. C.

Sugar Ration Recipes. A 14-page booklet called "Recipes to Match Your Sugar Ration" is now available free through the U. S. Department of Agriculture. It was prepared jointly by the Bureau of Home Economics of the USDA and the Consumer Division of the OPA. Among other helpful materials, prepared by the Bureau are seven attractive leaflets: "Green Vegetables in Low Cost Meals," "Dried Beans and Peas in Low Cost Meals," "Root Vegetables in Low Cost Meals," "Vitamins from Farm to You" (telling which vitamins are contained in which common foods and how to retain them through correct preparation of foods), "Fight Food Waste in the Home," "Food for Growth," and "Be a Victory Planner in Your Home." All may be obtained free by writing to the U. S. Department of Agriculture, Washington, D. C.

More for Your Money. "This book can help you save 20 per cent on your purchases every day." This is the promise made on the cover page of *How to Buy More for Your Money* by Sidney Margolius, shopping news editor of the New York City newspaper *PM*. It is published by Modern Age Books, Inc., New York City, and sells for $1. A helpful compilation of tips for smart shopping—urban in point of view—useful for high school and adult consumer education classes.

Lo, the Consumer! Two other pamphlets on the consumer: "Defense and the Consumer" (10 cents) prepared by the Institute for Consumer Education, Stephens College, on the basis of materials provided by the Consumer Division of the National Defense Advisory Commission; and "Consumer Problems and Projects" (35 cents), written by Brooks Spivey Creedy with the assistance of the Consumer Division of the Office of Price Administration.

The first is a 31-page publication of the Public Affairs Committee, Inc., 30 Rockefeller Plaza, New York City; the latter, a 72-page publication of The Womans Press (YWCA), 600 Lexington Avenue, New York City.

The projects sections of the YW pamphlet might have some tips for teachers. Typical are the following: "Girls who share apartments as well as housewives . . . might join with consumer groups that are . . . checking on rises and reporting 'good buys' to the group. . . . Find out what housing registries exist in your town. What standards do they have? . . . Get each girl to bring a list of her medical expenditures, including drugs, for the last year as far as she can remember."

Consumer Purchases Study. Six more publications in the consumer purchases series have recently come from the presses—which bring up to date the well-known studies of the economics division of the Bureau of Home Economics.

Five deal with five regions: New England, Middle Atlantic and North Central, Plains and Mountain, Pacific, and Southeast. They are "Family Food Consumption and Dietary Levels—Urban and Village Series" (30 cents); "Family Expenditures for Personal Care, Gifts, Selected Taxes, and Miscellaneous Items—Urban, Village, Farm" (20 cents); "Family Expenditures for Housing and Household Operation—Farm Series" (25 cents); "Changes in Assets and Liabilities of Families—Urban, Village, Farm" (25 cents); and "Family Income and Expenditures, Part 2, Family Expenditures—Farm Series" (35 cents).

A sixth publication deals with the farm series of the southeast region only: "Family Income and Expenditures, Part 1, Family Income—Farm Series" (25 cents).

All may be purchased from the Superintendent of Documents, Washington, D. C.

Heller Committee Wartime Budgets. The Heller Committee budgets for the families of an executive, a white-collar worker, and a wage earner in the nine years since the study was begun have provided an estimate of the cost of a "health and decency" standard of living at these three levels and also a measure of the changes in the cost of a given standard of living from year to year.

As the introduction states: "The continuity of the budgets has been maintained in 1942 by showing the cost of living at, as nearly as possible, the same standard as was maintained in pre-war years." In addition the Heller Committee has taken into account in 1942 the needs of a war economy which requires reduced purchases of consumers goods in order that part of the current income may be used to pay war taxes and to purchase war bonds. "The Committee has proposed 'wartime budgets' for each income level which will meet the needs of a war economy" and yet maintain adequate standards of community health and sound morale.

Price, 85 cents, University of California Press, Berkeley, California.

Did You Know? The average yearly time that U. S. school children attend school is about seven and a half months. More than a million children are in schools that are in session less than six months a year.

These are among the facts assembled for one page of the 6-page booklet, "Their Education Is Democracy's Strength," which is No. 7 of a 12-number Defense of Children Series published by the U. S. Children's Bureau. Five others in the series (this department announced the first six last April) are: "Through Play They Learn What Freedom Means," "Our Nation Does Not Need Their Toil," "Are We Helping Those with Special Needs?," "Protect Them from Harmful Community Influences," and "Is Their Safety in Wartime Assured?"

They are the sort of thing one likes to have to pass out at meetings arranged to get action on care of children—attractively gotten up with factual material reduced to the minimum needed to convince; planned for quick reading. For sale by the Superintendent of Documents, Washington, D. C., at $3 per 100.

Margarine Legislation. The history of legislation aimed at suppressing the production of margarine is given in a *Journal of Farm Economics* article printed August 1941 and now available free as long as the supply lasts by writing the author, W. T. Mickle of the Agricultural and Mechanical College of Texas, College Station.

Preparing Children for Defense. "To Parents in Wartime" is an excellent 20-page, 5-cent pamphlet issued by the U. S. Children's Bureau to tell parents the wise way to help children face wartime dangers.

"Your children can take it if you can.... Don't make up pretty names to soften the meaning of terms like 'black-out'....Children should not be teased or humiliated because of their fears but encouraged to carry on bravely in spite of them." These are some bits from the publication, which was prepared by specialists in child guidance and mental hygiene who are not on the Bureau staff, among them Caroline B. Zachry, director of the Institute of Personality Development of the Progressive Education Association. Order through the Bureau.

Marriage in the Family. "Bibliography Number 2, Books and Pamphlets of Interest to Teachers and Specialists in the Field of Marriage and the Family" has been prepared by Ernest R. Groves and may be purchased for 25 cents from Dr. Katharine Jocher, *Social Forces*, Chapel Hill, North Carolina. It was originally published in

the March 1942 issue of *Social Forces*. Dr. Groves indicates briefly what he considers the purpose for which each book seems best adapted. Seven pages.

Apparel Conservation. Two new mimeographed leaflets of the Bureau of Home Economics are "Re-cover Your Old Umbrella" and "Put a New Lining in Your Old Coat." Two other mimeographed publications are "Save Your Clothes" (20 pages) and "Reclaim the Family Wardrobe" (10 pages). Single copies free from the Bureau.

Work Clothes for Women. The U. S. Department of Agriculture bulletin of this name was written by Clarice L. Scott and may be purchased for five cents from the Superintendent of Documents, Washington, D. C. Attractive in format, well illustrated both by photographs and by drawings, it presents clothing that is functional and beautifully designed.

School Lunches in Country and City. That's the name of a 27-page pamphlet prepared by the Bureau of Agricultural Economics of the USDA and free while the supply lasts if ordered from the U. S. Department of Agriculture, Washington, D. C.

It shows the need for school lunches, how the program works, and results.

How to Make Effective Bulletins. Anyone who has anything to do with preparing bulletins will surely greet with a cheer this 24-page booklet "Bulletins: How to Make Them More Effective."

"This is shop talk for editors who have some other profession, and who must work on their publications on the side, just as much as it is for those who . . . work all day behind a door marked 'Editor,'" says the author, Catherine Emig, in her preface.

Really good material here. It's well worth the 50 cents charged by the publishers, Social Work Publicity Council, 130 East 22d Street, New York City.

Crisis in Manpower. Those who are concerned about the employment of women and especially of women with small children will find the 10-cent, 32-page pamphlet "The Coming Crisis in Manpower" has good background material for realistic approach to the problems concerned.

"It is clear that by 1943 millions of women will be needed for the war effort who are not now looking for work. . . . Few authorities believe that the necessary number of women can be enlisted by voluntary appeals alone. . . . There has . . . been a growing movement . . . for conscripting women for war work. This movement has been led, for the most part, by women who have felt that they should have the same obligations as men to serve their country."

Order from the Public Affairs Committee, Inc., 30 Rockefeller Plaza, New York City.

Heat and Rent. Two booklets which have been published recently by the Household Finance Corporation, Chicago, are "Home Heating" and "Money Management—the Rental Dollar."

Among topics taken up in the first are: how to prevent heat waste, how to get efficient operation of the heating plant, the various types of fuel-burning equipment, specifications for a fireplace that works.

The second discusses things prospective renters should consider before signing on the dotted line. A three-and-a-half-page check list of points to notice when looking at houses or apartments and two pages of tips as to moving day economies add to its usefulness.

Crafts in Wartime. This 22-page pamphlet was prepared for the National Recreation Association by Marguerite Ickis and may be ordered from the Association, 315 Fourth Avenue, New York City, for 35 cents.

Its avowed purpose is "to create or revive interest in simple handcrafts and to meet constant demands from parents, teachers, and recreation leaders."

Materials needed are to be found in practically every home: leather scraps for book hinges and belt buckles, old spools for decorative buttons, brown papers for scrapbooks and snapshot folders, a box to turn into an amusement kit for an air-raid retreat.

Housing Films. The Federal Public Housing Authority, Federal Works Agency, Washington, D. C., has compiled an exhaustive catalog of films and slides on housing. Most can be borrowed free of charge.

News Notes . . .

General

Della Thompson Lutes Dies. Mrs. Della Thompson Lutes, popular writer on household subjects, died of a heart attack at her home in Cooperstown, New York, on July 13. Onetime editor of *American Motherhood*, *Table Talk*, and *Today's Housewife*, and later housekeeping editor of *Modern Priscilla* and director of its Proving Plant, Mrs. Lutes in more recent years had been a contributor to such magazines as the *Atlantic Monthly*, *American Mercury*, *Reader's Digest*, *Woman's Home Companion*, and *Woman's Day* and had published a number of successful books, the locale of which was her native Michigan. Members of the homemaking department of the AHEA who attended the Pittsburgh meeting in 1938 will recall with pleasure her talk before that group.

Alabama

Alabama Home Economics Association. New officers of the Association for 1942–43 include: president, Dr. Agnes Ellen Harris; vice-president, May I. Cureton; secretary, Helen Bosard.

Red Cross Courses. Johnnie Lee Hulsey, Red Cross staff nutritionist in Jefferson County, reports that about 3,000 women were enrolled during the spring in official Red Cross courses under 80 authorized volunteer instructors.

California

California Home Economics Association. Wartime shortages have prompted the Association to substitute several issues of a single-page news release for the traditional semiannual newsletters.

As guests of the North Central Section, the executive council met at the Hotel Senator, Sacramento, on April 2 and 3 to transact routine business and chart a course for the coming months.

The Association now has 919 members and 92 student clubs.

This year's theme, "Adjusting Our Home Economics Program to Meet Wartime Conditions," is an outgrowth and continuation of last year's aims. The Association program includes encouraging junior and senior high school girls to join home economics clubs whether they are enrolled in home economics or not; encouraging and helping in the organization of homemakers clubs; inviting persons in other branches of the education field to take part in home economics association programs—not merely to attend meetings; encouraging CHEA members to participate in activities and programs of other educational associations; working with art teachers to bring about a closer tie-up between arts and home economics—in other words to achieve a real "related art" program; and producing home economics radio programs that offer real help with homemakers' wartime needs and problems.

1942–43 officers are: president, Ethelwyn Dodson, California Extension Service, Berkeley; secretary-treasurer, Mildred Reynolds, Mills College; president-elect for 1943–44, Olive Daniels, Exeter; secretary-treasurer-elect, Gladys Prunty, Tulare.

Central Section. The section is carrying on an active national defense program. Many schools and clubs have victory gardens; others have made Red Cross garments and sweaters. Teachers are conducting special nutrition classes for adults and Red Cross classes in first aid and home care of the sick and are performing canteen service.

Connecticut

Hartford Nutrition Committee. A reorganized plan of work, completed by members of the steering group, has been approved by the entire committee, and four subcommittees have been appointed to carry it out.

Nutrition education work in Hartford has been greatly facilitated during the past year by close co-operation of the committee with the American Red Cross and the women's division of the local defense council.

Fifty classes, reaching over 1800 women in Hartford and West Hartford, have completed the standard Red Cross Nutrition Course.

The Board of Education has asked members of the nutrition committee to assist in setting up a program of nutrition education in the schools, based on a nutrition survey conducted by Dr. Charles C. Wilson and on a nutrition demonstration conducted at the Brown School Playground.

State Department of Education. To conserve gas, tires, and time, the one-day conferences for homemaking teachers usually held throughout the school year were consolidated into one longer conference at the University of Connecticut from September 2 to 5.

Louise Stone, homemaking teacher at the Deep River High School, and Dorothy Benjamin, homemaking teacher at the Windsor High School, are working with Harold Mahoney of the State Department of Education on a co-operative counseling program for high school students. This new 11-months-of-work schedule for these teachers gave them an opportunity to get acquainted with the community and the girls in their classes before school opened.

Connecticut College. Summer courses included "The Pre-School Child—A Training Course for Teachers" and "Training for Child Care Volunteers." The latter was for volunteers who wished to be certified for work in local child-care agencies.

Margaret V. Davis did graduate work at the University of Chicago Summer School.

St. Joseph College. Eileen Neilan, dietitian, has become engaged to Frank Byrne.

Katherine Nugent was in charge of nutrition classes offered at the summer session.

Alice Gallivan is doing graduate work at Teachers College, Columbia University.

Windsor. The John Fitch High School has added a power sewing machine to the equipment in the homemaking department to give girls training for commercial production.

District of Columbia

District of Columbia Home Economics Association. The homemakers were hostesses at the final spring meeting held at the Cleveland Park Club on June 10. Reports showed that the home economists in the District had given freely of their time in teaching Red Cross nutrition classes, in serving on various defense committees, and in working with other agencies in the District.

New officers for the coming year are: president, Emma S. Byler, a teacher in the District schools who has been chairman of the Association's section of elementary and secondary school teachers; and corresponding secretary, Mrs. Mary Nye of the Washington Gas Light Company.

HEWIB's. The section entertained the executive councils of the D. C. HEA and the D. C. Dietetic Association at a dinner meeting in May. The program was a symposium on what magazine editors are doing to meet war conditions. The editors participating were: Elizabeth Woody, *McCall's Magazine;* Eleanor Howe, *What's New in Home Economics;* Helen P. Hostetter, JOURNAL OF HOME ECONOMICS; and Jean Guthrie, *Better Homes and Gardens.*

Florida

Gardens and Food Conservation. Mary Keown, state chairman, reports that 57 counties have chairmen of home gardens and food conservation committees and that community co-chairmen in each county are active in carrying out this defense program. As a result there are more vegetable gardens in Florida than in any previous year, and more interest is shown in food conservation than ever before.

State Department of Education. An integrated course in home living, science, and health, designed for boys and girls in the seventh and eighth grades, is being offered this year. A syllabus for it was prepared during the summer.

The vocational division of the Department co-operated with the Florida Agricultural and Mechanical College for Negroes in holding a conference for in-service home economics teachers from June 15 to 27. "Homemaking in the Wartime Emergency" was the theme.

Florida State College for Women. The June graduates included 42 in home economics.

The School of Home Economics, co-operating with the vocational education division of the State Department of Education, has planned special courses to assist in the present emergency.

Florida Education Association. During the Association's meeting in Tampa 150 home economists from all over the state attended the Pan American Good Neighbor Luncheon sponsored by the home economics section of the Association in co-operation with the home economics section of the Florida Vocational Association and the Florida Home Economics Association. Speakers included Mrs. Spessard L. Holland, First Lady of Florida, and Mrs. Anne Carson Dunaway, chairman of the home and community service of the state defense council. A revue of garments for defense work was staged.

Eleanor Howe, editor of *What's New in Home Economics*, spoke at the afternoon meeting, and the Pinellas County home economics teachers and defense council chairmen presented a skit showing co-operative efforts of both groups to organize a county action program for civilian defense.

Florida Vocational Association. "Home Economics in Defense" was the theme of the home economics sessions during the Association's meeting in Tampa. L. H. Dennis, executive secretary of the American Vocational Association, outlined vocational education's job in this war. Vocational teachers of agriculture joined with teachers of home

economics in a forum which presented a co-operative county program for victory and better living.

Extension Service. Members of the home demonstration staff are serving on the agriculture, nutrition, salvage, home gardens and food conservation, and physical fitness committees of the state defense council; and the home demonstration office is relating its work and programs to the state defense program and is helping to develop a corps of volunteer leaders. Two thousand women have volunteered as leaders to carry on agriculture's war work in co-operation with the agricultural agents.

Hawaii

University of Hawaii. The 12-week summer session, which began on June 8, included many of the usual home economics courses and special elementary and refresher nutrition courses.

The Home Economics Building, part of the University Emergency Evacuation Center, is to be used for housing 100 evacuees in case of another enemy attack. Students are being trained as nurses' aides and nursery school attendants. They are also preparing equipment for the Red Cross first aid center on the campus, gathering waste material, and donating their blood to the blood bank. Plans for feeding a total of 1,400 evacuees are being made by the University cafeteria directors and institutional administration students.

Carey D. Miller has been elected to membership in the American Institute of Nutrition.

Dr. Martha Potgieter, now on leave, is working with Dr. Genevieve Stearns at the University of Iowa on iron balance studies using dried-egg powder.

Board of Health. Mrs. Marjorie Abel, nutrition specialist, brought to completion in the late spring her Red Cross nutrition and canteen courses for volunteers in canteen work. As a final examination the volunteers prepared lunch in an Army field kitchen for 90 coast artillery men. Mrs. Abel has also been chairman of a committee to work out emergency storage rations for infant feeding in connection with the Office of Civil Defense Food Control. The committee planned foods, techniques, and equipment needed in nursery kitchens in evacuation centers.

Department of Public Instruction. During the summer, women teachers were expected to volunteer for community service or attend summer school, and girls between 14 and 18 years of age were trained for emergency work in food centers, first-aid units, and nursery centers. Community workshops where individuals could bring their problems or food products for preservation were tried out.

Hawaii Dietetic Association. Meetings of dietitians and home economists have been resumed. At one meeting, Colonel White, head of food control for Hawaii, explained the difficulties encountered in supplying food for the Islands during the first few weeks after the "blitz." Details of food-control plans, distribution, co-operation with the Federal Surplus Commodities Corporation in providing foods for immediate and future use, and reasons for not shipping certain items were explained.

Idaho

Joint Agriculture and Homemaking Teachers Conference. Leaders at the annual conference held again this year at Sun Valley from August 10 to 15 were: Mrs. Agnes English Vaughn, regional nutrition representative, Denver, Colorado, and Muriel Brown and D. L. MacDonald, both of the U. S. Office of Education. Discussions covered problems confronting individuals and farm families because of the war, and adjustments in homemaking and agriculture education to help meet individual and family needs growing out of the war and postwar planning.

University of Idaho. Margurette Reinhart of Boise, an alumna who until recently was home service director for the Idaho Power Company, was awarded first prize in the Laura McCall awards made by the Edison Electric Institute. This award, given for outstanding contributions to the advancement of electrical living in the home, was an engraved plaque and $100 in United States War Bonds. Miss Reinhart is now a dietitian in the Midtown Hospital, New York City.

Illinois

Illinois Home Economics Association. "The Home Economist in Wartime" will be the theme of the Association's annual meeting with the Illinois Vocational Homemaking Teachers Association in Peoria on October 30 and 31.

State Nutrition Committee. A state-wide nutrition conference was held in Springfield on June 19 and 20 with 161 nutrition workers, representing many state organizations and agencies, in attendance. Dr. Lydia Roberts of the University of Chicago, chairman, and Mrs. Kathryn VanAken Burns of the Illinois Extension Service, co-chair-

man, led the group in considering ways and means of carrying out nutrition activities at the county and local levels.

Summer Workshops. *University of Illinois Nutrition Workshop.* Problems studied included: ways in which homemaking teachers may co-operate with the school administrator, faculty, pupils, and community in setting up an all-school nutrition program; a suggested food unit organized on the family meal basis for a 60-minute period; suggestions and plans in home economics for adult education; ways in which homemaking teachers may work with the out-of-school youth in helping them adjust to the present situation; planning a hot lunch program for a small school; and suggestions for the teacher of the standard Red Cross nutrition course.

Normal University Housing Workshop. Barbara VanHeulen of the Farm Credit Administration assisted in the workshop's study of family finances and adjusting the low-income budget to wartime needs. Attention was also given to planning a homemaking program that will more adequately function in the home and community, and to management of recreation to meet present needs.

Western State Teachers College Home Nursing Workshop. This workshop included a series of five lessons on health and home nursing for adult classes, units on health and home care of the sick for a boys' home living course, and units on health and home care of the sick for general homemaking.

Farm Security Administration. Illinois has six medical care plans. These programs have brought about an improvement in the general health of FSA families because they have made it possible for these families to have adequate medical and hospital care. The plans permit some inoculations.

Conference of Teacher-Trainers. On July 2 and 3 Rua Van Horn of the U. S. Office of Education met with teacher-trainers and state supervisors to evaluate the state program of home economics education. Goals were set up for a three-year period.

Indiana

Ball State Teachers College. A conference for all home economics teachers in the northeast section of Indiana under the direction of the district supervisor, Mrs. Marie P. Ringle, was held at the College from June 15 to 19. Refresher courses in Nutrition, School Lunch, Consumer Education, and Adult Education were given. More than 150 persons attended.

Plans have been made to offer evening classes during the school year to meet the needs of regular students and others who may desire courses for credit.

Purdue University. The conference for home economics teachers of the northwestern section of Indiana called at the University from June 15 to 19 by the Vocational Division of the State Department of Education was attended by 175 teachers.

The program included a panel discussion of "The Relation between Community Agencies and the Homemaking Program" and a variety of study groups.

Isabel Diehl, a former instructor in home nursing and family relationships, has arrived at a foreign port for active duty with her hospital unit.

At the annual House Directors' Training School from June 15 to July 10, 24 states were represented among the 100 women enrolled. Visiting instructors included Sarah Blanding, dean of the School of Home Economics at Cornell University; Mrs. Katherine Ingle, dean of women at the University of Cincinnati; Mrs. Ruth McCarn of Northwestern University; and Mrs. Harding Cecil, vice-president of Brockett-Cecil, Inc., Evanston, Illinois.

Gary Public Schools. Twenty-one Gary home economics teachers and one Whiting teacher met in a summer workshop from June 22 to July 3 in the Horace Mann School to pool their experiences and their thinking in considering the contribution which home economics can make to the personal-social development of boys and girls. Muriel G. McFarland of Purdue University was the workshop leader.

Problems considered by committees were: effective teaching methods and teaching materials, organization of home economics courses at various grade levels, special needs of out-of-school youth, and units of work for adults in the national emergency.

The major accomplishments of the workshop were: planning first steps in curriculum revision for Gary, determining objectives for various areas of home economics in the light of present-day needs, selecting learning experiences to insure the attainment of these objectives, and developing plans for evaluating student progress.

The program of curriculum revision developed in this workshop is to be continued through teacher committee work under the leadership of Ruth Schooler, city supervisor of home economics in Gary.

Kansas

Farm Security Administration. Mrs. Ruth Jackson, county home management supervisor in Wallace and Greeley Counties, has been doing effective nutrition work in co-operation with her state and county nutrition committees, which operate as part of the defense councils or war boards. To save time, energy, and tires, she has worked with and through agencies already established, and at their regular meetings has spread the gospel of better nutrition. Meetings have been held with Women's Units of the Farm Bureau, local garden clubs, grange organizations, church groups, parent-teacher associations, American Legion, and high school assembly groups.

Mrs. Jackson reports that in the seven years she has been an FSA county home management supervisor she has seen the Wallace and Greeley County areas in western Kansas change from a dust bowl to an area resembling a garden in the spring. Wallace County feels fortunate in being one of the counties where the Tenant Purchase Program is in effect. Many of its FSA families are now in a position to start home ownership and are planning their lives for a period of perhaps 40 years if it takes that long to pay for their farms.

Maryland

Maryland Home Economics Association. At the spring business meeting the following officers were elected: president, Elizabeth Anderson, Junior High School #79, Baltimore; and secretary, Mrs. Clara Annon, Girls' Vocational School, Baltimore.

Hood College. Courses in Home Management and Child Development were conducted at the 6-week summer session by Martha C. Thomas and Onica Prall. Fifteen students were enrolled. Two home management houses, each with a baby, were operated, as well as a nursery school in which 10 children were enrolled.

C. Law Watkins, a member of the art and home economics staff, painted an oil portrait of President Henry I. Stahr which the class of 1942 purchased and presented to the College.

Laura Flynn taught a 20-hour refresher course in Nutrition for 36 home economics graduates, which qualifies them to do emergency nutrition teaching.

A course in Home Nursing, meeting Red Cross requirements, was organized for prospective teachers and taught by the College nurse and by the home economics education instructor.

University of Maryland. An agriculture and home economics workshop on the preservation and conservation of food was held on the campus from June 16 to 18. Lecturers included University instructors and representatives of the federal government.

A nursery school has been instituted to serve as an observation and teaching center for child-study classes. Ann Hyland, a graduate of Boston University, is in charge. Enrollment is limited to 20.

Ruth Lee Thompson, a June honor graduate, has a fellowship in foods and nutrition.

Extension Service. Because of labor shortages on the farm and tire and gasoline rationing, the Annual Rural Women's Short Course, usually held at the University each June, was canceled this year. The one-day "Homemakers' Day" held instead was attended by between 1200 and 1500 persons. At the close of the afternoon program the Rural Women's Short Course Club had its annual Silver Tea at the historic Rossborough Inn.

The Neighborhood Plan of the Extension Service is proving a satisfactory means of spreading information to small groups in the state.

New home demonstration agents in Howard and Garrett Counties are, respectively, Mildred Flanagan to replace Catherine Newton who was married to Dr. Cecil Brown; and Marianna Lee Long to replace Mildred Barton, who was married to Robert Hoffman.

At the 18 sewing-machine clinics held in 9 counties by Helen Shelby, clothing specialist, and Albert Krewatch, rural electrification engineer, 250 machines were put in running order.

Jessie D. Hinton, home management specialist in the Extension Service for the past six years, resigned on February 1 to take a position with the Farm Security Administration in Indiana. Esther Knowles, formerly of Pennsylvania State College, succeeded her on July 1.

Baltimore. Exchange classes of eighth-grade boys and girl have been approved by the Board of Superintendents. The boys will be given one semester of work in home economics, including units on nutrition and clothing, and the girls will have one semester of work with tools found about the home and will study wood finishes and metals and construction problems in wood.

The home economics classes in clothing and textiles (junior, senior, and occupational) turned over to the Red Cross 1,784 articles of clothing which had been constructed during the school year 1941–42. In addition to their construction problems, many of the school clubs knitted sweaters, afghans, and socks for the Red Cross.

Massachusetts

Massachusetts Home Economics Association. Dr. W. Elmer Ekblaw of Clark University was guest speaker at the Annual Spring Meeting, held jointly with the Worcester County Association.

Ann T. Person of Worcester took over her duties as president on August 1. Other new officers this year include May C. Turner of Framingham, first vice-president; Florence G. Dorward of Springfield, second vice-president; Janette Kelly of Cambridge, secretary, and Mary T. Gill of Springfield, treasurer.

Dr. Alice F. Blood, a former president of the AHEA, and S. Agnes Donham, former comptroller, were awarded life memberships in the AHEA at the Ellen H. Richards Centennial Dinner the last night of the annual meeting in Boston.

Connecticut Valley Home Economics Association. The 1942–43 officers are: president, Ruth M. Gabler of Springfield; vice-president, Isabel McCobb, Northampton; secretary, Marguerite Pettee, Northampton; and treasurer, Beatrice Miller, Indian Orchard.

Eastern Massachusetts Home Economics Association. Mrs. Clare Walsh of the State Department of Education was elected president of the Association at the annual spring meeting at the YMCA in Boston. Ann Bridge, English novelist and short-story writer, was the dinner speaker.

Massachusetts State College. Mrs. Ruth Gould Shufelt is a member of the advisory committee on child-care volunteer courses. This committee, with the Massachusetts committee on public safety, has worked out standards for courses for training certified child-care volunteers.

A second leader-training conference at the College was part of the state Victory Garden program.

Rural war-action committees have been organized as a "word-of-mouth" means of getting information to families. Each neighborhood leader or "minuteman" has about 15 families to whom he takes information. Programs have covered enriched bread, use of fats in wartime, use of fuel, and prevention of fires on the farm and in the home.

Boston. Marion E. Gray, who formerly taught nutrition in Newton High School; at Pine Manor, Wellesley; and at the Garland School in Boston, has joined the staff of experts assisting in the Army feeding program. She is associate home economist in the subsistence division of the Quartermaster Corps.

Newton. Jeannie B. Kenrick has resigned as head of the home economics department of the Newton High School.

Plymouth County. Marjorie Cantoni, nutritionist for the Massachusetts Department of Health, has been assigned to work on nutrition problems and programs in Plymouth County.

Michigan

Michigan State College. One hundred thirty-five college graduates who had majored in home economics attended the refresher course on wartime problems in clothing and home furnishings arranged by the department of textiles, clothing, and related art on May 9 and 16.

Extensive exhibits, lectures, demonstrations, and panel discussions were features of the sessions, which dealt with the impacts of the war on textiles. Also considered were techniques and equipment for the home production, care, conservation, and renovation of clothing and home furnishings, as well as opportunities for community service for the home economist.

Mississippi

State Nutrition Committee. May Haddon, nutritionist for the Extension Service, served as general chairman of the three one-day Nutrition Schools held in each of the 82 Mississippi counties from April 27 to May 1. These programs were planned by the State Department of Public Health in co-operation with the state nutrition committee. The subject matter on health and nutrition was adapted and presented by county health departments assisted by other members of county nutrition committees and state representatives of the agencies co-operating in the nutrition program.

A meeting of the committee was held July 14 at State College to consider ways and means of expanding the use of enriched flour in Mississippi.

Home demonstration agents in 12 counties are using local radio stations to further the spreading of nutrition information.

Mississippi Home Economics Association. *Negro Section.* Florence Donnell, home demonstration agent at Winona, was elected section chairman at the spring meeting.

Delta State Teachers College. The home economics department now has a nursery school.

Mississippi Southern College. Emily Stribling and Angela Lacey did advanced study this summer.

Extension Service. The State Home Demonstration Council held its annual business meeting

at State College on July 20 and 21. Attendance was limited to four delegates from each county.

Home demonstration agents are being authorized to teach a Red Cross nutrition course in order to train leaders and teachers.

Recent weddings among home demonstration personnel include Kayte O'Neal to Lenox Foreman, Jeanette Hunter to Haskell Gambrell, Helen Lucille Alsworth to Stanley L. Ducker, Mary Emma Cooper to Ralph Grafe.

New members of the field staff are Katie Travis, home demonstration agent-at-large in southwest Mississippi, and Laura Louise West in Benton County to succeed Grace Brister, resigned.

A class of 13 prospective agents was trained by the state extension staff at State College in June.

Negro Section. Beatrice Childress, Negro agent for girls' 4-H clubs, reports an enrollment of 3,236 girls in 31 counties in the state canning contest.

Counties recently employing Negro home demonstration agents include Benton and Union Counties. Scott and Kemper Counties also have made application for this service.

Salary increases for Negro agents because of war activities were made by the Board of Supervisors in Issaquena, Sharkey, and Carroll Counties.

Farm Security Administration. All FSA families who are members of neighborhood discussion groups have pledged themselves to produce to the maximum in America's battle for Food-for-Freedom.

Montana

Montana Home Economics Association. "Conservation and the Home Economist" was the theme of the Association's annual conference in Missoula on March 20 and 21. The meetings were devoted to the problems of management, consumption, safety, and nutrients. Round-table discussion groups covered these subjects and presented summaries at the general session. Montana has over 160 Association members, and there were 100 in attendance at the Missoula meeting.

Officers for the coming year are Mrs. Bertha Olson, president; Anne Platt, vice-president; Mary Kimball, secretary; and Geraldine Clewell, treasurer.

Nutrition Courses. Home economists throughout the state are giving much of their time to the teaching of nutrition and canteen courses. In Great Falls, more than 150 women secured their Red Cross nutrition certificates last spring. In order to aid some of these teachers, Montana State College made arrangements for refresher courses in nutrition to be given in Bozeman, Great Falls, Billings, Kalispell, and other Montana towns during July and August. Mrs. Agnes English Vaughn, regional nutritionist with headquarters in Denver, was present at several of these meetings.

Nebraska

State Nutrition Committee. The committee has designed a window sticker in red, white, and blue which is awarded to each person who completes an organized course in nutrition throughout the state. A knife and fork make a V and under it an apple, a potato, an egg, and a carrot make the three dots and a dash.

The committee has printed the leaflet "The School Lunch, How Home and School Co-operate" as a means of stressing the importance of the school lunch, how it can be made to function, and how different agencies and organizations can support it.

Ruth Leverton has written a set of six lessons of nontechnical nutrition information for classes without a trained leader. All of the material is in question-and-answer form.

Nebraska State Teachers College, Kearney. Mrs. Bernice D. Dunlavy is offering a course in Red Cross nutrition this semester.

The class in beginning clothing under the instruction of Louise Enochs last spring completed a unit in constructing clothes for British children. Twenty tailored wool dresses embellished with hand stitchery were turned over to the Red Cross.

University of Nebraska. Margaret Liston, head of the division of family economics, is on leave this year for study toward her doctorate at the University of Chicago. Helen Wehling will serve as Miss Liston's substitute.

Thelma McMillan has been appointed research assistant on the nutrition staff of the Experiment Station. She will work on the anemia studies in the human nutrition laboratories with Ruth Leverton.

Extension Service. As a wartime measure to help in the food preservation program, Nebraska home demonstration agents are testing the accuracy of the pressure-cooker gauges in their counties. Mary Runnalls, home management specialist in charge of the project, held training meetings for agents in June.

Victory captains and victory neighborhood leaders are aiding the Service's wartime program in Nebraska by transmitting timely information on

the Victory Home and Garden Program, nutrition, fire prevention and control, and the anti-inflation program to the various communities.

One method used by the Extension Service to encourage more canning among Nebraska homemakers has been the holding of canning bees. Two outlines for the leaders of them were prepared by May Stanek, nutritionist.

A series of combined demonstration and judging days for 4-H members and leaders was held in each county during June and July. One man and one woman state specialist co-operating with local agents discussed the demonstrations and conducted the practice judging.

State Department of Vocational Homemaking Education. Because of the urgency for meeting community needs this summer and for having sufficient time for adjustment this fall, the annual State Vocational Homemaking Conference was held the last week in May rather than the last week in August. The conference was a working one concerned with adjustments in the homemaking program to meet war problems. Seven groups worked intensively on Nutrition in School and Community, Summer Program of Work in the Community, Fall Gardens and Food Storage, Home Care of the Sick, Care of Equipment and Home Mechanics for Women, Management Problems in Adult Classes, and the Third Year in the Three-Year High School Homemaking Program.

New York

New York Home Economics Association. Over 600 members elected the following officers by mailed ballots in April: president-elect, Evelyn Herrington, Syracuse University; vice-president, Gertrude Conroy, New York City; secretary, Margaret E. Prentice, State Department of Education, Albany. The Association is planning to hold its annual meeting in Saratoga Springs next May.

State Nutrition Committee. G. Dorothy Williams is continuing as executive secretary of the committee. In the spring Mary Fitz Randolph, former emergency home demonstration agent-at-large, was appointed field worker.

During the summer months the county nutrition committees were actively engaged in supporting the food preservation program of the Victory Garden councils.

State War Council. The Office of Civilian Mobilization has developed a neighborhood discussion course of ten lessons on "Fighting the War at Home." Home economics extension workers and homemaking teachers are helping to train discussion leaders.

Buffalo State Teachers College. The home economics staff sponsored three conferences for home economists of western New York in the spring on "Food for Freedom," "Textiles to the Front, Too," and "Maintaining Family Morale."

Cornell University. The College of Home Economics constructed a "Rolling Kitchen" from a secondhand truck in order to demonstrate the type of mobile unit which has played so large a part in both civilian and military relief in England. The truck can serve a simple light meal of soup, coffee, and sandwiches to 600 persons or a complete meal to 150.

The Alumnae Association of the College of Home Economics has established an undergraduate scholarship named for Martha Van Rensselaer, pioneer in the development of home economics education at Cornell University and director of the College until her death in 1932.

Cornell University's 36th Annual Farm and Home Week is scheduled for February 1 to 5.

Russell Sage College. Myrtle L. Johnston, director of the school of home economics for the past 17 years, retired in June.

Edna Mitchell, assistant professor of teacher education in home economics, resigned to become head of home economics at Canton Agricultural College this fall.

Skidmore College. The College defense council continues to operate under the slogan "Learn, Work, Save, and Give."

Syracuse University. Syracuse is now offering a Ph.D. in home economics. The major fields in which a program may be chosen include foods, nutrition, home economics education, and household economics (including consumer education).

Teachers College, Columbia University. Mrs. Helen Judy Bond is representing home economics at the War Action Center in New York City.

Extension Service. Dorothy M. Proud, formerly assistant director of the dietetics department at the University Hospital in Cleveland, joined the extension staff last spring as a specialist in mass feeding.

In 55 counties, nearly 17,000 men and women volunteers are functioning as Extension Service "minutemen." Two minutemen (a man and a woman) are responsible for keeping in touch with about 15 or 20 families in order that a system of rapid communication can be in effect between the

state Extension Service headquarters and all rural families.

North Dakota

North Dakota Agricultural College. Alba Bales retired as dean of the School of Home Economics in September. Lucile M. Horton, who has been in charge of teacher-training work in the home economics education division for several years, has been appointed acting dean.

A refresher course in food preservation for professional workers employed as teachers, extension workers, and home management supervisors was held from May 27 to 29 at the College.

University of North Dakota. Eva S. Schairer conducted a Red Cross nutrition course from June 22 to July 4 in place of the refresher course in nutrition formerly scheduled.

Tilda Natwick conducted a refresher course in Food Preservation from July 6 to July 18.

Extension Service. Mrs. Irene Albers has been appointed associate county agent in Barnes County to replace Mrs. Pauline Juhlke Lee, resigned.

Between June 23 and July 2 training meetings for volunteer leaders in food preservation were held in each of the 53 counties in the state as a joint extension, vocational home economics, and FSA project. This food-preservation work is one phase of the Victory Garden campaign and is under the sponsorship of county war boards and civilian defense councils.

During early June the Extension Service assisted local people with a series of county Victory Days, a joint effort of Homemakers and 4-H clubs. Attendance ranged from 200 to 1,000. "What Rural People Can Do to Help Bring Victory as Speedily as Possible" was the theme.

Farm Security Administration. Wilma K. Hildre has been transferred from Lisbon to Valley City to be in charge of the home management work in Ransom County and to assist with the work in Barnes County. Mrs. Maxine S. Killius, home management supervisor at Cando, has been transferred to Langdon to be in charge of the home management work in Cavalier County.

Home management supervisors who resigned in the spring or early summer were Mrs. Thelma B. McGillis at Langdon, Mrs. Frances Novacek Gahr at Bismarck, Mrs. Evelyn Hofstrand Gahr at Carson, and Carol H. Sank at Steele.

New appointees are Marjorie Lou Handy, who will be stationed at Cando in charge of Towner County, and Mrs. Ella Mae Berdahl, in Stark County with headquarters at Dickinson.

Work Projects Administration. North Dakota has 38 WPA gardens in operation. These consist of school gardens, community gardens, and gardens sponsored by County Welfare Boards to raise garden stuffs for needy families. Indian agencies have been particularly interested in community gardens because they have found that WPA supervision of the individual plots and gardens has led to proper use of seeds given yearly to the Indians. The Indian agencies prefer to have garden produce dried whenever possible because this is the original Indian method of food preservation.

Ruby Livedalen, state supervisor of the WPA housekeeping aide project, and Evelyn Wattam, state supervisor of the WPA feeding program, are teaching the standard Red Cross nutrition course to a class sponsored by the Bismarck chapter of the DAR.

A new unit of the WPA housekeeping aide project has just been opened at Leeds.

Two play centers for preschool children have been set up under the WPA child protection program, and it is expected that six more will be opened in the near future.

Ohio

Akron University. Mildred Swift has resigned to become head of the School of Home Economics at the University of Nevada.

Baldwin-Wallace College. Ethel Sapp Tudor was asked to serve on the committee to write the material for the home economics pamphlet to be distributed by the NEA during National Education Week in October. The subject assigned her was "Home Economics Builds Sturdy Character."

Heidelberg College. Working with the County Health Board, the City Mother's Forum, and the YMCA, the girls in the home economics department managed a city farm project with the low-income group in Tiffin. The girls taught classes in clothing, foods, and handicraft and themselves profited from the knowledge gained in teaching and social service work.

Ohio State University. The staff of the School of Home Economics has completed the first part of an extensive study and revision of the undergraduate curriculum.

Mrs. Faith L. Gorrell and Dr. Winona Morgan were members of a campus committee assisting with the conference on human development sponsored by the department of psychology and held on the campus from June 29 to July 3.

A home economics curriculum laboratory directed by Dr. Hazel H. Price was open to experienced teachers during the first term of the summer session.

Ohio University. The home economics girls are now enjoying a second home management center in the old, recently remodeled cottage adjoining the building that houses the home economics department. The furnishings are simple, functional, and contemporary. The work of furnishing and equipping was directed by a faculty committee made up of members of the home economics and art departments. Classes in home economics made their contributions, but the final decisions were made by the committee.

Western Reserve University. On May 1, Child Health Day, Helen Hunscher, Mrs. Alice Smith, Helen Robertson, and A. J. Thomas took part in a broadcast over Station WGAR in Cleveland.

Jean Pinder has been made assistant nutritionist of the nutrition service for the Cleveland Health Council.

Cleveland Public Schools. The production class of the home economics department of Central High School last spring made costumes for a modern dance recital by the Karamu Dancers, a group affiliated with Karamu House, a Cleveland institution in which colored people of artistic ability are given an opportunity to engage in dramatic productions.

Oregon

Oregon Home Economics Association. The Association co-operated with the state nutrition committee in sponsoring a dinner meeting at which Marjorie Heseltine of the U. S. Children's Bureau spoke.

Oregon State College. At the summer session Jennie I. Rowntree of the University of Washington taught two courses in nutrition; Dorothy Benson of Michigan State College taught courses in related art; Ruth Holmes of Montana State College gave a course in clothing selection and construction; and Mrs. Mildred Weigley Wood of the Phoenix Union High School taught courses in adult education in home economics and the teaching of home management.

Vocational Education Conference. The Annual State Conference for Homemaking Teachers at Oregon State College from June 15 to July 3 included a curriculum workshop, panel discussions, committee work, and other activities which gave the teachers an opportunity to exchange ideas and receive help in meeting their needs for the coming year. Over 75 attended.

Farm Security Administration. The FSA has been able this year to assist financially the part-time farmer, the farm laborer with sufficient acreage to produce war foods, and the families below the economic levels ordinarily aided through the standard loans. In some counties where the "Food for Freedom" loans were the heaviest, a "homemaker's aide" to the regular home management supervisor has been employed to give the families on this program the same type of supervision as the families receive who are on the standard rehabilitation program.

Pennsylvania

Pennsylvania Home Economics Association. Mrs. Anna G. Green, chief of home economics education in the State Department of Public Instruction, was honored at the annual meeting of the Association at Hershey in May. Mrs. Elizabeth Morales, the president, paid tribute to Mrs. Green and presented her with a silver tea service in appreciation of her leadership during the 25 years she has been with the Department.

State Nutrition Council. Laura Drummond, chairman, called a meeting of the Council in Harrisburg on September 18 and 19. According to program chairman Florence Peters, this meeting, which was open to the public, was planned to assist county and local nutrition chairmen.

The theme of the Friday evening meeting was "Nutrition in Industry." Dr. Frank Boudreau, chairman of the committee on nutrition in industry of the National Research Council, was one of the speakers. At the Saturday morning meeting Ernestine Becker of Johns Hopkins University spoke on "The Importance of Nutrition."

A. C. Martz, executive secretary of the state council of defense, brought members of the nutrition group up to date on activities of the council. Chairmen of committees on victory gardens, consumer interests, and day care of children made progress reports.

Drexel Institute of Technology. The nine Drexel graduates who received honorary doctor's degrees at the June 13 commencement exercises included Mary I. Barber, '12, food consultant to the Secretary of War; and Grace E. Frysinger, '06, senior home economist in the U. S. Extension Service.

Pennsylvania State College. Exhibits of work

done during the summer session were featured at the "Open House" on August 5 at which Edith Harding's demonstration class gave a public demonstration.

Visiting summer session instructors included Mary Mason of Texas State College for Women, who conducted a course in housing and directed one of the home management houses; Catherine Doerr of Temple University, who taught a course in clothing conservation; and Pearl Horning of Plattsburg (N. Y.) State Normal School, who was in charge of another home management house.

Conference on Supervision. About forty supervisors, county advisers, and teachers attended the 3-week conference on supervision at the Pennsylvania State College in June. Berenice Mallory of the U. S. Office of Education led this conference and acted as consultant for the committees working on supervision problems. One committee worked on "adjustments of the homemaking program to economic and social conditions"; another surveyed "supervision practices" and suggested techniques that might assist county advisers and supervising teachers; while other committees considered "home experience" and "evaluation."

County Advisers Meet. The county home economics education advisers and itinerant teacher trainers held their annual conference in State College on June 19 and 20. Berenice Mallory of the U. S. Office of Education participated in this conference also. Mrs. Anna Green of the State Department of Public Instruction presided at the opening meeting on Friday evening, and Mrs. Edith Davison and Irene Patterson, also of the Department of Public Instruction, were in charge of the meetings on Saturday.

South Dakota

Home Economics Registration. A list of 668 home-economics-trained South Dakota women, representing all but five counties in the state, has been compiled under the direction of Mrs. Mary D. Eberle of Brookings. Registration cards from the AHEA and from the South Dakota committee on nutrition for defense were sent to the entire list. Sylvia Griffith, secretary of the South Dakota Home Economics Association, has written to Colonel Beckwith, head of the state defense council, offering the services of these home economists.

State Defense Council. Mrs. Helen Cooledge of the University of South Dakota is a member of the technical advisory committee to the council.

Nora M. Hott, state home demonstration leader and chairman of the state nutrition committee, is in charge of all nutrition activities for the council.

Farm Security Administration. Mrs. Amy Swanson of Hot Springs was recently appointed state home management supervisor to replace Mrs. Jennie Grant Treadwell, who resigned.

Texas

North Texas State College. Home economics registration at the summer session showed a 10 per cent increase over that of the 1941 summer session. New courses in Food Preservation, Gardening, and Poultry Husbandry were offered.

Myra Sowell assisted Dr. Merle Bonney in directing the Child Development Workshop held in co-operation with the Texas inter-professional commission on child growth and development.

Texas State College for Women. A nutrition workshop, arranged by the state homemaking education department, the State Board of Health, the regional nutritionists, and the home economics department, was held at the College from June 24 to July 15.

In August the College, in co-operation with the North Texas State College, held a conference for teachers of homemaking in the area. "Adjusting the Homemaking Program to the War Situation" was the theme.

Texas Technological College. Beginning this fall a course in elementary nutrition and food selection will be a graduation requirement for physical education majors, both men and women.

Mrs. Mina Wolf Lamb, assistant professor of foods and nutrition, received her Ph.D. at Columbia University in June.

Johnne Bowles, assistant professor of home economics, was loaned to the State Department of Education for the summer months to serve as director of the nursery school and parent education program for the Texarkana Defense Area. Gladys Armstrong, district supervisor of Area 1, took Miss Bowles' place during the summer.

Extension Service. Mildred Horton, vice-director and state home demonstration agent, is a member of the Texas National Cotton Week committee.

Dosca Hale, specialist in parent education and child development, has been made a member of the Texas inter-agency council on the young child.

Winifred Jones, county demonstration agent of Colorado County, succeeds Grace I. Neely as food preservation specialist.

Farm Security Administration. FSA's 1942

production goals will exceed those of 1941 by an increase of 10 per cent for milk, 25 per cent for eggs and poultry, 17 per cent for pork, and 6 per cent for lamb and mutton, and every family will have a more adequate year-around garden.

The FSA supervisors have emphasized the feeding and care of subsistence livestock, the care of dairy products, initial and subsequent vegetable plantings, garden irrigation and cultivation, food preservation and conservation. As an aid in the "better storage" program, six film strips entitled "Today's Storage Is Tomorrow's Dinner" were secured from the FSA office in Washington, D. C., for use as a teaching device in farm family group meetings throughout Texas.

The shortage of jars, cans, and pressure cookers has brought about a revival of the age-old practice of drying fresh fruits and vegetables for later use. For the most part, a type of food drier utilizing controlled rather than sun heat is being used. This produces quicker and more complete dehydration, better color in dried products, better flavors, and greater retention of certain vitamins. The necessary heat may be supplied by a cookstove or by an outdoor furnace in which inexpensive fuel materials usually found around a farm can be used.

Virginia

Virginia Home Economics Association. Officers elected at the spring district meetings included: president, Mrs. Mildred T. Tate; second vice-president, Sallie Guy Davis; secretary, Margaret R. Svoboda.

State Nutrition Committee. The committee has set up nutrition organizations in all of the counties of the state and in most of the independent cities.

At a meeting in Lynchburg on April 18, the members voted that the committee become a permanent organization, with a chairman and secretary elected annually. A finance subcommittee was appointed to find ways and means of financing the work of the rapidly growing organization. Dr. W. T. Sanger, president of the Medical College of Virginia, was elected chairman to succeed Dr. Mildred T. Tate, who had served as chairman since the organization of the committee. Ella Agnew was elected secretary.

With the formation of a permanent organization the need for re-evaluating the aims and objectives of the original committee was felt. For this purpose a subcommittee, with Maude Wallace as chairman, was appointed to set up short- and long-time objectives for the committee.

Nutrition Work in Richmond. The 50 members of the Virginia nutrition committee, a section of the state nutrition committee, have developed the following projects.

1. Presentation of nutrition courses consisting of 10 two-hour lessons and demonstrations, taught by volunteer teachers, cafeteria managers, dietitians, and nutritionists (In the spring, 1400 women, including 150 Negroes, had taken these courses.)
2. An intensive nutritional campaign in two white and one Negro precincts
3. Organization of a Home Study Course of 8 nutrition lessons for women who are not free to leave home to attend meetings
4. Securing co-operation of the local press, radio stations, business organizations, and wholesale and retail food dealers in giving publicity to information on nutrition
5. Compilation of standard low-cost budgets for the use of all social agencies in the city
6. Committee work within schools to improve the standard of children's lunches
7. Purchase by the Richmond Public Library of two films on nutrition for use in meetings and classes and making nutrition books available both in this library and in that at the Medical College of Virginia

Virginia Polytechnic Institute. A regional nutrition workshop held at the Institute from June 25 to July 11 was well attended. For two hours each day, well-known nutritionists presented and interpreted for the group the newer findings in nutrition.

Extension Service. Home demonstration work was extended into a number of new counties on July 1 with the new home agents working in two-county units.

Plans are being made to hold restyling clinics and construction schools for clothing in the various counties during August, September, and October.

Washington

State Nutrition Committee. The state is now divided into nine districts, each composed of four or five counties, with each district under the immediate supervision of a home economics specialist. This helps to promote the training of nutrition teachers for each county through refresher courses and especially aids the rural counties in developing worth-while programs.

Nutrition Fair. The nutrition committee of Spokane City and County sponsored a Victory

Fair on May 14 and 15 as a means of demonstrating the many fields in which it can help with consumer problems relating to nutrition and health. The Fair was held in the auditorium of a large department store. The exhibits were of a non-commercial nature.

Central Washington College of Education. Ruth Redmond, assistant state supervisor of home economics, has accepted the position in the home economics department left vacant by the marriage of Louise Brakel to Earl Hedges on June 6.

Delia Forgey, formerly assistant dietitian and instructor in institutional economics at Washington State College, is director of dormitories.

Thirty-four were enrolled in a ten-week Red Cross Nutrition Refresher Course given by Helen Michaelsen.

To meet the demand for nursery schools in defense areas and war production centers of the state, the College offered a nursery school short course to train leaders and assistants for the nurseries set up by the government.

University of Washington. Members of the nutrition study group taught by those who have had the refresher courses are assisting the sugar ration boards as volunteer workers. A nutrition leader was placed on each ration board to advise consumers on their canning problems. More than 200 volunteers were used.

A nursery school operated on a co-operative basis has been opened in the home management house released for that purpose. Each of the mothers enrolled in the course "Guidance for Parents," which meets two hours weekly, serves one day in the nursery school, first observing and later participating. Mrs. Juanita Williams is the director.

A new home management house will be occupied by the home economics seniors this fall.

Margaret Richert, formerly house director for the residence halls, is now an Army dietitian in a combat zone. Genevieve Bucknell has been appointed her successor.

Dr. Rowntree's new bulletin "Nutrition on the Home Front" is being distributed through the University bookstore.

Due to the emergency and the great need for home economics teachers, the State Board of Education has ruled that for the duration students with four years of training may receive a temporary certificate to teach home economics. Since 1931 high school teachers in the state have been required to have five years of college training.

Washington State College. "Mobilizing Ourselves for the War and for the Future" was the theme of the high school demonstration class conducted as part of the home economics workshop at the College this summer. Classes were planned to show graduate students and home economics teachers observing the course effective teaching methods which can apply to all high schools, especially during wartime.

Jane Currie, coffee shop dietitian, resigned and left for Chicago on August 1.

West Virginia

West Virginia Home Economics Association. Enrollment at the state Home Economics Victory Meeting at Jackson's Mill on May 1 and 2 was larger, in spite of the tire rationing, than at any previous spring meeting. High lights of the program were a symposium on "Gearing Home Economics into War Effort—From a Man's Point of View," led by Professor James B. Lowther of West Virginia University; a talk on "The FBI's Part in National Defense" by Clarence H. Corkran, special FBI agent; a talk on "Living for Victory" by Jessie Harris of the University of Tennessee, who became president of the AHEA at the Boston meeting in June.

Officers elected included: president, Nell White, West Virginia University; vice-president, Blanche E. Price, Shepherd College; secretary, Mabel E. Hiller, Clarksburg; treasurer, Dorothy Viewig, Morgantown.

State Nutrition Committee. A State Nutrition Institute was held at Jackson's Mill on April 30. Speakers included Eleanor Enright of the Office of Defense Health and Welfare Services and J. O. Knapp, director of the West Virginia Extension Service.

Fairmont State Teachers College. During the first six weeks of the summer session Eva D. Compton taught courses in Home Management and Elementary Clothing, and during the second six weeks, Jean Richmond taught courses in Child Care and Development and Elementary Nutrition.

Shepherd State Teachers College. The new Science Hall used for the first time during the summer session provides a large foods and nutrition laboratory, a textile and clothing laboratory, art room, laundry room, and a spacious cafeteria which, until the cafeteria equipment is available, will be used as a social center.

During the first six weeks of summer school the home economics department offered courses in

Child Development, Foods and Nutrition, and Consumer Economics. Blanche E. Price directed the program.

West Liberty State Teachers College. The clothing clinic—a laboratory course that gave each student an opportunity to work out her own problems—was popular with summer school students. Clothing alteration, construction, buying, and remodeling were included.

West Virginia Institute of Technology. June brought to a close the first year of work in home economics at the Institute. By carrying on an accelerated program wherein 12 hours of credit have been given in two 6-week summer sessions, the Institute will be able to grant the B.S. degree in home economics for the first time in the summer of 1943. Mrs. Zola H. Butterfield is head of the home economics department.

A two-year technical course in institution management, open to both men and women, will be offered this fall under the direction of Esther Young, who was formerly at Washington State College.

The home economics building, expected to be ready for use this fall, will house large clothing, art, food, laundry, and equipment laboratories; a four-room apartment for home management; a library; and two classrooms. Modern equipment will be installed. Last year's home economics students had an opportunity to participate in the planning.

Wisconsin

Milwaukee Home Economics Teachers' Association. An exhibit of books and pamphlets was displayed at the Association's final meeting of the year at the City Club on May 11.

Officers for 1942–43 are: president, Elizabeth Burns, Humboldt School; vice-president, Gertrude Kurtz, Wisconsin Avenue School; secretary, Mary Carroll, North Division High School; treasurer, Una Mae Krebs, Peckham Junior High School.

State Council of Civilian Defense. In addition to its defense programs the Council has organized a number of long-time service programs of significance to civilian health and morale. One deals with consumer interests. Through a state advisory committee, of which May Cowles of the University of Wisconsin is chairman, consumer-interest committees have been set up in 56 of the 71 counties in the state as a part of the county organization of civilian defense. Newspapers and radio stations are co-operating by giving publicity to consumer material. Local programs and study groups are being urged. Consumer information centers have been started in a few places.

Milwaukee-Downer College. In line with the widespread program to aid consumers in meeting war emergencies, seniors in foods and nutrition entertained the mothers of Milwaukee-Downer students by demonstrating the use of sugar substitutes in baking.

University of Wisconsin. The home economics department took an active part in the program presented on Wartime Farming Day on June 13. The women's program included information on "sugar-shy" recipes, methods of preserving and storing foods, better nutrition, the care of clothing, and the care of home equipment.

Last spring some of the instructors in the foods division conducted Red Cross nutrition courses and a canteen course. Some were attended by University students; others, by the public.

Extension Service. Members of the state clothing and textile committee, appointed last spring at the request of the textiles and clothing division of the AHEA, include Ellen Carlson, FSA, Marinette; Gladys Galaski, Vocational School, Waterton; Marion Juaire, University of Wisconsin; Lillian Jeter, Stout Institute; and Gladys Meloche, Extension Service, chairman. At a committee luncheon meeting on May 9 in Madison a report from each member was carefully discussed and a summary made for the national office.

Doris Tuttle, Mamie Tillema, and Helen Davis are new home agents assigned to Pierce, Ozaukee, and Juneau Counties, respectively.

Stasia Lonergan, who has been transferred from Portage County to Columbia County, has been replaced by Dorothea Barton.

In Crawford County, Frances Baird replaces Caroline Hubatch, who was recently married.

In Manitowoc County, Karem Vanderzee replaces Mrs. Ruth Huckstead Braun, who recently resigned to assume home duties.

It is the aim of the Extension Service to reach every Wisconsin rural home with assistance in food preservation. As a follow-up to a series of training meetings in March on gardening, a series of six district training meetings for county extension agents was held in May on food preservation and garden diseases and insects. During June the extension nutritionists with the county extension agents trained township and neighborhood leaders to give canning demonstrations in rural school districts in the state.

Wyoming

Extension Service. The fourth annual meeting of the State Home Demonstration Council in Casper on June 9 and 10 attracted a record attendance in spite of transportation difficulties. "Ranch Women in the War Program" was the theme.

Madge J. Reese of the U. S. Extension Service spent July 1 to 3 at the University of Wyoming with the extension staff.

Phyllis Richards, Lincoln County home demonstration agent, and Edith Gwynn, Park County home demonstration agent, studied during the summer at Washington State College.

Farm Security Administration. FSA assistance to 30 Spanish-American families at Wheatland consists of the co-operative purchase of 30 acres of land which, for the past three years, has provided their winter's food supply. With the help of the home management supervisor these families have learned to can the vegetables grown and also to enjoy vegetables which three years ago they did not eat. An irrigation well completed this year should increase production to the extent that surpluses will be available for sale.

State Department of Education. The Pacific Regional Conference for Vocational Education, held in Cheyenne from May 4 to 8, was followed by a three-day research conference for home economics workers, attended by 32 state supervisors and teacher trainers from 11 western states, and Edna P. Amidon, Susan Burson, and Beulah I. Coon of the U. S. Office of Education. Problems confronting families and adjustments necessary in family life education were considered.

Last year 850 high school home economics girls attended 5 one-day district homemaking rallies in the state. A forum discussion of "Ways the High School Girl Can Help Families Meet Some Wartime Problems" was the outstanding feature of these meetings. Club reports, costume revues, reports of home projects, and stunts and group recreation were other program features.

New Jersey's Canteen in Britain

Acknowledgement of $1500 sent to Britain to maintain a canteen in Lincolnshire has been received by the New Jersey Home Economics Association, which, together with the New Jersey Dietetic Association, raised the money in about one month's time.

Harriet I. Stone of the Dietetic Association was chairman of this project. Bridge parties, dinners, and personal solicitations were the means used to raise this sum.

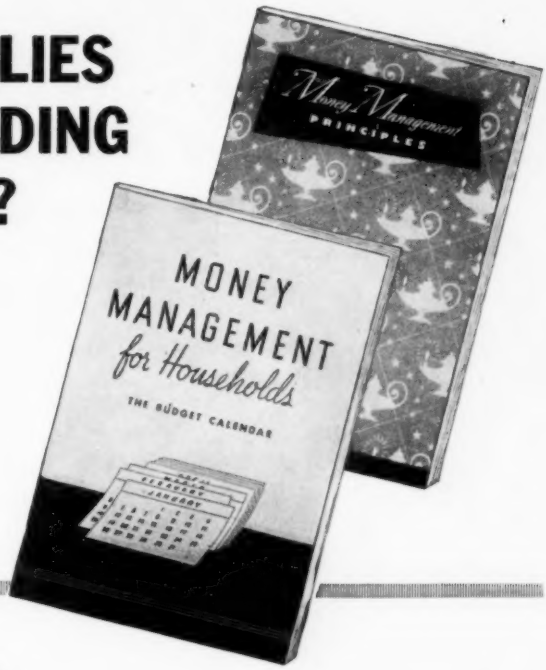
The following paragraphs from a letter sent by The Dowager Marchioness of Reading, D.B.E., shows that this money was received at an opportune time.

"The canteen you are maintaining went through all the blitzes and you can imagine what a lot of repairs have been necessary because of the ruts and holes it has had to travel over, bomb splinters and falling masonry it has often not succeeded in dodging, and holes in its roof often due to enemy action.

"We had the greatest difficulty before your magnificent contribution arrived in keeping this canteen going, but now we know that we can have it in first-class running order to meet any future emergency."

HOW SHALL FAMILIES PLAN THEIR SPENDING IN WARTIME?

Here are two timely booklets for your courses in budgeting



TODAY every good budget will be enlisted in the country's service. What we do with our individual earnings is now a matter of national importance. Budgeting has become an essential part of all classroom work dealing with the consumer's role in wartime economy.

Pre-war budgets are no longer in tune with the times. Wartime conditions have increased the incomes of many families. Other families find their incomes "frozen" or reduced. All families face the problem of buying War Bonds, paying increased taxes and meeting higher living costs. Budgets need replanning to meet the new situation.

A plan for every family

Here's where Household's booklets on budgeting can be a big help. They deal with the broad issues in money management rather than with fixed spending patterns. They show how any family can work out its own spending plan to meet its own special needs. They give a simple way to stretch family income over War Bonds, contributions to USO and the Red Cross, higher taxes and growing living expenses.

Household's budget plan wasn't developed by theorists. It is based upon the experiences of successful families, and has been thoroughly tested. Hundreds of families are enthusiastic about it.

"Money Management Principles" develops what should be the family's attitude toward budgeting. "The Budget Calendar" shows the budgeteer how to put the principles to work. It contains work sheets for every payday in the year. Students can use these sheets for working out problems posed by the teacher.

3¢ stamp brings both

We believe you will find these booklets very helpful in teaching budgeting to meet today's problems. We will gladly send you copies of both booklets for a 3¢ stamp to cover mailing costs. Why don't you send the coupon now?

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HOW TO MAKE ANY CRANBERRY RECIPE
A SUGAR-SAVER!

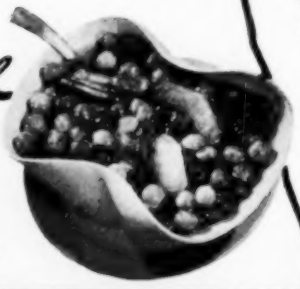
USE CORN SYRUP, MAPLE SYRUP, HONEY!

Here's a wartime cooking lesson to feature this fall. It's simple—it's new—it's patriotic teaching! Use any of these alternate suggestions in your favorite cranberry recipe:

1. CORN SYRUP—Substitute 1 cup dark or white corn syrup for each 1 cup sugar up to half the sugar called for in recipe. Reduce liquid ¼ cup for each 1 cup corn syrup used.
2. MAPLE SYRUP—Substitute 1 cup maple syrup for each 1 cup sugar up to half the sugar called for in recipe. Reduce liquid ¼ cup for each 1 cup maple syrup used.
3. HONEY—Substitute ½ cup honey for each 1 cup sugar up to half the sugar called for in recipe. Reduce liquid 2 tablespoons for each ½ cup honey used.

~~2 cups sugar~~ 1 Cup Sugar
~~1 1/4 cups water~~ 1 Cup Corn Syrup
1 Cup water
4 cups Eatmor Cranberries
2 peeled apples, sliced thin
1 2-inch stick cinnamon
Grated rind 1 orange
Grated rind 1 lemon
Corn Syrup
Combine sugar and water, bring to boiling point and add remaining ingredients. Cook slowly, without stirring, until cranberry skins pop open and apple slices are clear—10-15 minutes. Cool sauce in cooking dish. Makes 1 quart sauce.

For Instance
CRANBERRY FRUIT SAUCE



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SHE'S just a woman with a milk pail! But with her men at war, she is a front-line fighter in this country's drive to make Americans stronger through better nutrition.

For in the diet recommended by the National Nutrition Program to make Americans fit for the grind of total war, milk and milk products are ranked first in importance.

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This makes the name Borden a mark of reassurance on any milk product.

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The Problem Lies in People

And it's every nutritionist's worry. The diets of 3 out of 4 Americans, according to Government surveys, fail to supply the vitamins and minerals they should! How, in spite of this hurdle, can the people be sure their diets measure up to the high vitamin-mineral standards of the National Research Council?

The first answer and the main answer is food. The right food will in time correct America's dietary deficiencies, but it's a long haul answer. It means educating women in food selection, food preparation. It means, somehow, overcoming losses of vital nutrients caused by methods of food transportation, storage, and processing which we cannot now control. In the meantime, millions of Americans are not meeting today's emergency at the full peak of physical fitness.

There's another answer in today's emergency—to make every effort to obtain the best available diet and then supplement it with Vimms. These good-tasting tablets give you all 6 essential vitamins, in the full daily minimum amounts established by the Government. (And the Government's standards have recently been approved by official medical committees*!) Vimms also give you 3 vital minerals. Yet no product of comparable type and potency costs so little.

*Journal of the A.M.A., July 18, 1942, pp. 948-9

HERE ARE THE GOV'T REQUIREMENTS —NOW RECOGNIZED BY THE A.M.A.:	VITAMIN A 4,000 USP Units	VITAMIN B_1 1,000 micrograms	VITAMIN B_2 2,000 micrograms	VITAMIN C 600 USP Units	VITAMIN D 400 USP Units	VITAMIN P-P NO VALUE STATED †	3 VIMMS MEET OR EXCEED THESE GOV'T STANDARDS FOR EVERY VITAMIN
HERE'S HOW THE VIMMS FORMULA COMPARES ON ALL 6 VITAMINS:	VITAMIN A 5,000 USP Units	VITAMIN B_1 1,000 micrograms	VITAMIN B_2 2,000 micrograms	VITAMIN C 600 USP Units	VITAMIN D 500 USP Units	VITAMIN P-P 10,000 micrograms	VIMMS ADD: CALCIUM 375 MGS. PHOSPHORUS 250 MGS. IRON 10 MGS.

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"At least two fruits daily"

says Uncle Sam

. . . and one of them can still be Libby's field-ripened pineapple from Hawaii!

• As a Home Economist, you have an important part to play in our Government's nutrition program. You are a liaison officer—interpreting the Official Food Guide to students and homemakers in terms of everyday meal planning.

In this matter of two fruits daily, as recommended by the Guide, you'll naturally consider *variety*. So—for variety *plus* flavor and color appeal—it's good news to know you still can get Libby's fine Hawaiian Pineapple.

Libby's Pineapple, cut when fully sun-ripened and *quickly* packed, is famous for its luscious tangy flavor. With its good content of Vitamins B_1 and C, it makes a valuable contribution to nutritious meals. And please remember Libby's descriptive labels—a real help in wise buying.

Libby's
FANCY HAWAIIAN SLICED PINEAPPLE
U.S. NEEDS US STRONG
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THIS TYPE OF FOOD IS AMONG THOSE RECOMMENDED IN THE NUTRITION FOOD RULES
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• Fruit desserts, made with Libby's Pineapple, supply needed vitamins and taste simply grand. With small, thin pancakes, serve this: Drain juice from a No. 2 can Libby's Crushed Pineapple; heat juice and thicken with 2 tbsps. cornstarch mixed with 2 tbsps. water. Add 1 tbsp. lemon juice, 1 tbsp. orange juice, and 1 tsp. grated orange rind. Mix with the pineapple and serve. (Serves 6)

Libby's HAWAIIAN PINEAPPLE
Sliced · Crushed · Tidbits and Juice!

THE MALTEX 100% BREAKFAST

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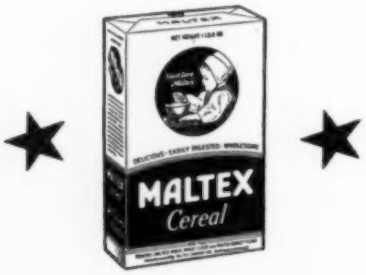
For years, this company has advocated a "100% Breakfast": Fruit, Maltex Cereal with Milk or Cream, and Buttered Toast with a glass of Milk . . . thus providing four of the eight different classifications of Essential Foods now recommended by Uncle Sam for *daily* consumption.



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Hallowe'en High Spots!

Frosted Gingerbread Bars Made With KELLOGG'S ALL-BRAN

¼ cup shortening	¼ teaspoon soda
⅓ cup sugar	¼ teaspoon salt
1 egg	1½ teaspoons baking powder
½ cup molasses	½ teaspoon cinnamon
½ cup Kellogg's All-Bran	⅛ teaspoon cloves
½ cup strong coffee	⅛ teaspoon ginger
1½ cups flour	

Blend shortening and sugar thoroughly; add egg and beat until light and fluffy. Stir in molasses, All-Bran and cold coffee. Sift flour with soda, salt, baking powder and spices and add to first mixture. Bake in greased pan in moderate oven (350°F.) about 30 minutes. Frost cake in pan with orange frosting as soon as it is taken from oven. Cut into bars. Yield: 3 dozen 1¼ x 2¼ inch bars (9 x 13 inch pan).

ORANGE FROSTING:

2 cups confectioner's sugar	½ teaspoon orange flavoring
2 tablespoons hot milk	6 drops orange coloring

Combine sugar and milk; beat well. Add flavoring and coloring, mix and spread on warm gingerbread bars.

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❶ Uncle Sam knows men like chocolate. He knows, too, that chocolate restores energy. That's why the emergency ration for the armed forces is a chocolate bar.

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❷ "The men behind the men behind the guns" need the extra energy found in chocolate. That's why chocolate cookies, cakes or Semi-Sweet Chocolate in some form should be in every worker's lunch box . . . why Nestle's Semi-Sweet is important to men and women on the industrial front.

There's still enough for all fronts

Uncle Sam has first claim on Nestle's Chocolate—but you'll still find plenty on your grocer's shelves. Because Nestle's Semi-Sweet is a nutritious food, not merely a confection, it has a definite place in the National Nutrition Program . . . give it a place in *your* planning this year, too.

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❸ Chocolate desserts are universal favorites. Made with Nestle's Semi-Sweet they're more appetizing and economical. *Any* recipe using Semi-Sweet needs less sugar. That's why Nestle's is important on the home front.

Chocolate contains carbohydrates and vegetable oils—is high in caloric content. For energy—for a quick pick-up, eat chocolate.

FREE: Write for Lunch Box Recipes—a new Nestle's folder of sugar-saving, fatigue-resisting, delicious suggestions for school children and workers on all fronts. It contains many tempting cake and cookie recipes especially created to stay fresh a long time—to pack and ship easily. Send today—Semi-Sweet Chocolate Department, 81 Hudson St., New York, N. Y.

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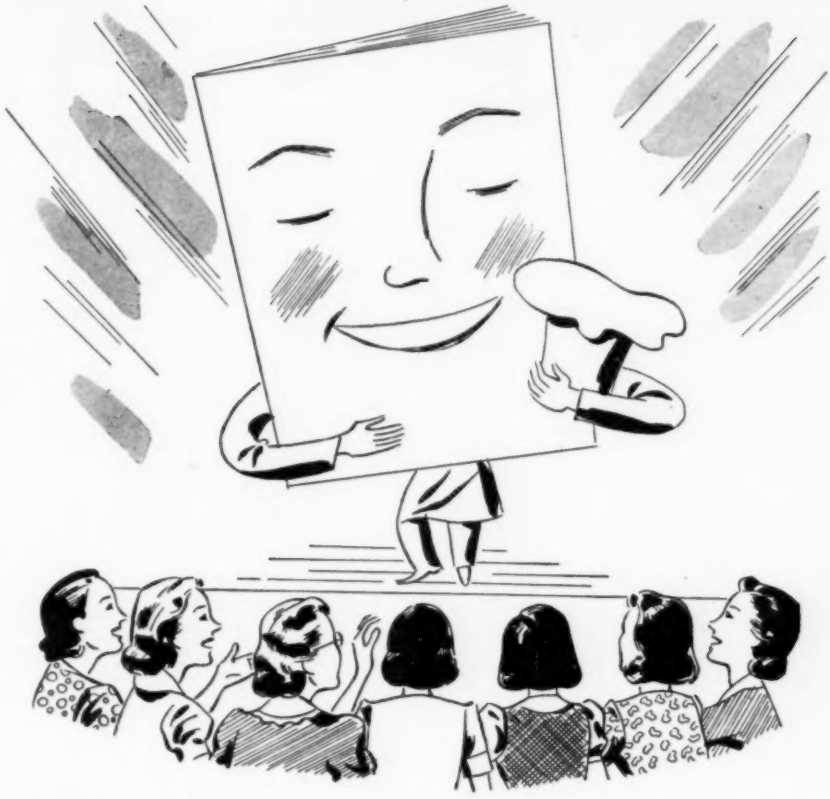

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* And Re-Orders year-after-year confirm it.

Because of this conclusive evidence of their popularity, the booklets will be made available again this year—with a number of timely revisions.

Added to the booklets on cakes and pies, for example, are several new sugar-saving recipes. Included in the pie booklet is Crisco's simple new pastry method which makes it so easy for students to turn out tender, flaky pie crust the first time. Information in the Cooking Fats and Frying Facts booklets will be of unusual interest at this time because it ties in with our Government's current campaigns on fat conservation and nutritional values.

You will find the material in these authoritative booklets well adapted to the instruction of both beginning and advanced students. Sample sets are now being distributed. If you have not already received your free copies, write for them.

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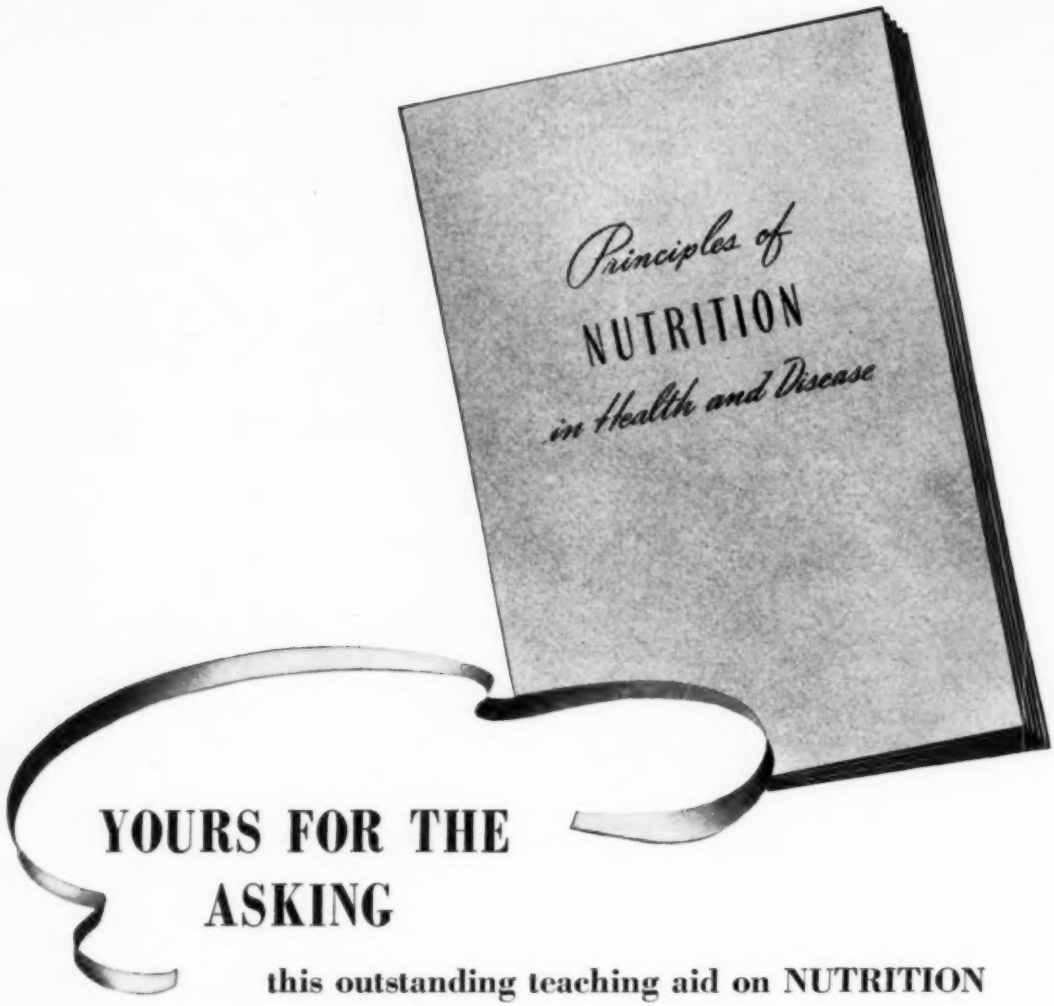

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this outstanding teaching aid on NUTRITION

Home Economists are cordially invited to send for a complimentary copy of this new brochure. To our knowledge it is the only book of its kind. For teaching material it has earned highest praise. Its text and the charts shown make it a simple matter to evaluate any commonly eaten food, meal or menu for calories as well as essential nutrients. The information it presents will enable anyone to organize a meal or an entire dietary adequate in calories, protein, minerals and vitamins, in keeping with the recommendations of the Committee on Food and Nutrition of the National Research Council. Merely sign and mail the handy coupon.

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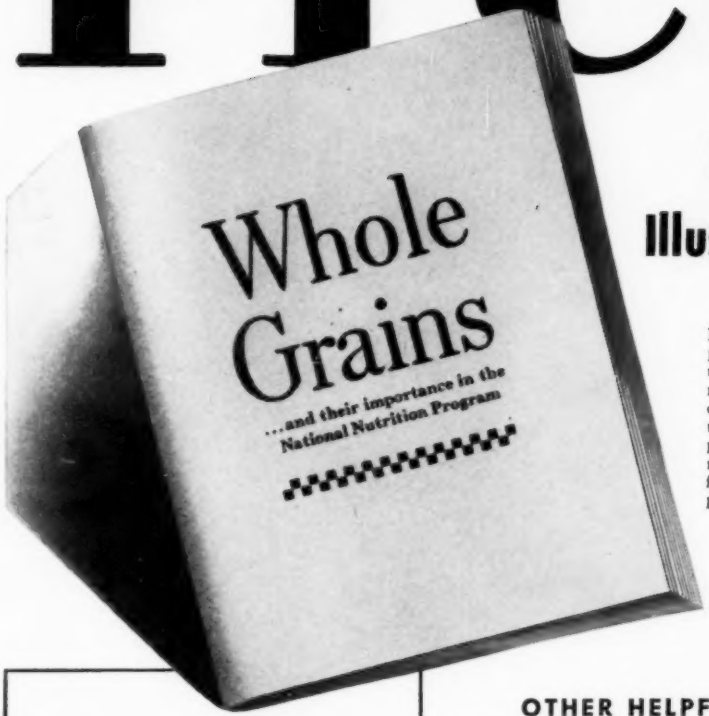

New 20-page Illustrated Textbook

Resume of scientific data on grain products, comparative nutritional value of whole grain products versus enriched or restored. Includes tables and charts helpful in teaching nutrition to students and homemakers. Comprehensive double-page chart of food nutrients, chief sources, requirements, functions. Two pages of tested recipes for appetizing, nutritious dishes.

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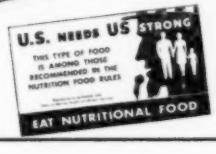
A hot whole wheat cereal that needs no cooking—that's Instant Ralston. Rich in energy. Extra-rich in thiamin—because of added wheat germ. Just stir into boiling water or milk...and serve. Ralston Whole Wheat Cereal is the same—except it cooks in 5 minutes.

Ry-Krisp is a whole grain crisp bread—delicious, nourishing every-meal bread. Valuable in special diets.



OTHER HELPFUL MATERIAL FREE

For Home Economics Students: 6-page folder with resume of information on whole grain products, diagrams, recipes, chart of food nutrients.

For Homemakers: To be distributed by teachers of nutrition classes. Stresses need for better nutrition, value of whole grain products. Includes recipes, food nutrients chart, ideas for study groups.

Quantity Recipes: Tested recipes for low-cost custards, puddings and meat-stretching main dishes using whole grain cereals. Recipes to serve 6 or 50—on handy 4x6" cards.

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The Facts about Fall and Winter Colors

THE MOST IMPORTANT COLORS for fall and winter are *all colors!*

Because dyestuffs and finishing materials require chemicals which are used in munitions, fabric manufacturers will have to take dyes as they can get them, at times when it does not interfere with the war effort.

They will offer us beautiful and wearable fabrics in a host of lovely colors, but they *must supply colors as they can.* Any concentrated demand for a certain color or color group is running contrary to the national interest.

Colors which use little dye, such as natural tones, beiges, and sand colors will be good. We will look ahead to more emphasis on pastel tones, and widely spaced prints with little "coverage" of the background.

CROWN TESTED AND APPROVED RAYON FABRIC

SEND FOR CLASSWORK LEAFLET, "A Legend of Loveliness" presents the fall fashion picture for school age girls, with silhouette and color news, sketches and pattern information. Write, indicating the number you need, to BETTY LOU LARSON, *Educational Division,* American Viscose Corporation, 350 Fifth Avenue, New York City

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SALES OFFICES: 350 Fifth Ave., New York City; Providence, R. I.; Charlotte, N. C., Philadelphia, Pa

For a Wise Choice of Colors!

Let's Be Individual – Now especially, color choice should be made on the basis of appropriateness to the individual rather than fashion. When clothes have to give long service, as in wartime, becomingness is of continued importance.

Choose Accessories that Will Click—In this season of many colors, it's important to choose accessories that will harmonize with many shades. Black, brown, and blue, and leather colors are basic. Some shades of red and green "go well" with many other colors. Planning ahead on both wardrobe and accessories will insure against misfits.

Look for a Promise of Color that Lasts —The best guide to serviceable fabrics is an informative label, such as the label found on "CROWN" Tested Rayon Fabrics. It tells you whether the fabric was meant for sports wear, lingerie, dresses, or other use... tells whether it should be laundered, washed by hand, or dry-cleaned . . . and predicts lasting color beauty and wearability

HERE ARE SOME OF THE ROMANTIC COLORS OF THE SEASON AHEAD!

Warm Browns, beiges, natural undyed colors (Atlantic sand)

Blues salute, and gray air-force, gallant blue for younger styles, soft commando blue, and two aqua shades, Panama and Chinese

Reds... bright reds, blue reds (not deep).

Greens... kelly, and woods green.

And accenting notes of Honor gold, Fuschia, Ming orange (rust), Royal blue, Peacock blue.

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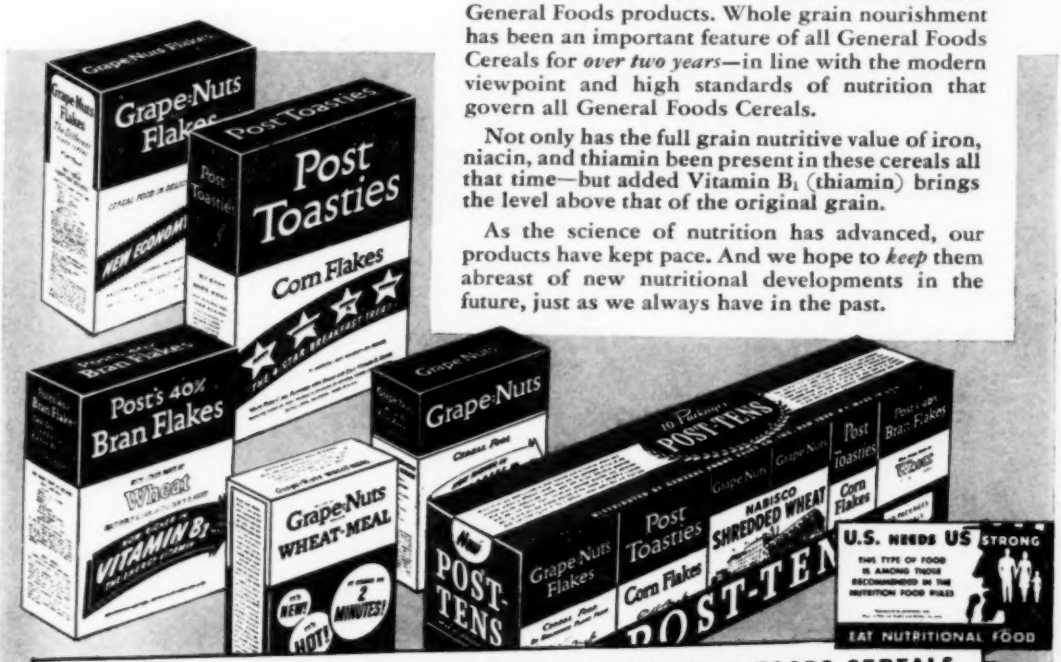

THIAMIN, IRON, AND NIACIN CONTENT OF GENERAL FOODS CEREALS COMPARED WITH THE CEREAL GRAINS—WHEAT, CORN, AND BARLEY

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THE CEREAL GRAINS								
Whole Wheat	1 oz.	43	13.0	17.0	1.3	13.0	2.0	13.0
Whole Corn	1 oz.	39	12.0	16.0	0.2	2.0	0.6	4.0
Whole Barley	1 oz.	54	16.0	21.0	0.6	6.0	1.2	8.0
GENERAL FOODS CEREALS								
Post's 40% Bran Flakes (a wheat bran cereal, with other parts of wheat)	1 oz.	50	15.0	20.0	1.4	14.2	2.92	19.5
Grape-Nuts Flakes (a wheat and barley cereal)	1 oz.	50	15.0	20.0	1.7	17.0	2.07	13.8
Grape-Nuts (a wheat, barley, and corn cereal)	1 oz.	80	24.0	32.0	1.4	14.0	1.98	13.22
Grape-Nuts Wheat-Meal (a hot whole wheat cereal)	1 oz.	100	30.0	40.0	1.8	18.0	1.49	9.93
Post Toasties (a white corn cereal)	1 oz.	40	12.0	16.0	.85	8.5	.878	5.85
Post-Tens	contain individual servings of Post Toasties, Post's 40% Bran Flakes, Grape-Nuts, and Grape-Nuts Flakes. For their thiamin, iron, and niacin content, see individual listings above.							

*Daily requirements for thiamin and iron based on minimum daily requirements specified by U. S. Food and Drug Administration. Values for niacin based on daily allowances recommended by Committee on Foods and Nutrition, National Research Council.

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PROTECTIVE housekeeping—the art of taking better care of the home—is a vital issue these days. This new educational film dramatizes this subject in an entertaining but instructive manner. The scene is the campus of Colton College. To compete for a Home Economics Prize Essay Award, one of the students collects facts about the history of wax down through the ages, and the multiple uses for wax in modern protective housekeeping. A romance running through the film contributes unusual story interest, but does not detract from its educational impact.

Running Time—29 minutes
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Suggestions for Making Dole Hawaiian Pineapple Products "Go Farther"

Home economists and homemakers have a new task. More ingenuity is required to cope with decreased availability of some products and at the same time meet nutritional requirements. For example, the Government is requesting about one of every three cans of Hawaiian pineapple, and about one of every four cans of Hawaiian pineapple juice for the armed forces, from the pack of the calendar year 1942. This may mean that many of us might not have so much Hawaiian pineapple and Hawaiian pineapple juice as we have been accustomed to having. Yet this does not mean that delicious Dole Pineapple Products need disappear from your daily meals.

Today many people are learning that fruits and fruit juices are an essential part of the daily diet. The suggestions below show how pineapple can be combined with many of the foods which should be eaten daily. Notice that some of these foods have the vitamins, in which they are particularly high, indicated. By including pineapple as suggested, flavor is enhanced and the vitamin values of the dish are augmented by the B_1 and C content of the pineapple.

FRUIT CUPS. Use Dole Crushed Pineapple and Tidbits with other fruits such as oranges*, grapefruit, berries*, melons*, apples, apricots*, peaches*, pears, cherries, prunes*, and grapes. These "other" fruits can be either cooked or fresh. (*A good source of vitamin A.)

SALADS. Use Dole Sliced Pineapple with other fruits; with cottage cheese (A, B_1, G); with shrimps (A, B_1, G); with avocados (A, B_1, C, G); with carrots (A, G); with cabbage (A, C, G); with lettuce (A, C); with chicken (G); with green peppers (A, C).

MEAT AND VEGETABLE DISHES. Serve sauteed pineapple—Crushed, Tidbits, or, Sliced—with baked ham, pork (B_1, G) lamb (B_1, G,) pork sausage (G); with sweet potatoes (A).

DESSERTS. Serve ice cream (A) with Crushed Pineapple. Include Crushed or Tidbits in puddings and gelatin desserts, in upside down cake, pies, and cake fillings. When eggs are used in these desserts, a good source of vitamins A and G is assured.

ROTATE DOLE PINEAPPLE JUICE at breakfast with tomato juice, orange juice, and grapefruit juice. All are good sources of vitamins B_1 and C.

DOLE Hawaiian Pineapple Products

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★ **Get your scrap in the scrap NOW!** These fighting words call for the cooperation of everyone to collect junk metal of all kinds . . . critical materials needed at once for the production of munitions, tanks, airplanes, and ships. Remind your classes.

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NUMBER 1 IN A SERIES OF TEACHING HELPS

☆ CANNED VEGETABLES ☆

and their place in the National Nutrition Program

THE PEOPLE OF AMERICA are favored above all the people of the world, in regard to the vital question of food. Our supplies are not only abundant, and in great variety, but our methods of commercial canning—making nutritious food available the entire year round—have been developed to a point of splendid efficiency.

Today, grocers' shelves are lined with canned foods. They are there *with the permission and approval of the United States Government.* Indeed, a great portion of the nation's harvest would be lost completely, if it were not for the canned food industry.

A Service to your Students

You are doing a real service to your students, therefore, when you tell the true and inviting story about commercially canned foods. Indirectly, you are helping America when you make canned food dishes interesting and appetizing... when you emphasize that these delicious dishes and good nutrition go hand in hand.

Canned foods are rich in vitamins

Modern commercial canning may be looked upon as cooking at its best. It is done in airtight cans under scientifically controlled conditions.

So today, everyone in America may regard canned foods as an abundant source of vitamins and food essentials for a well balanced diet. Indeed, canned foods occupy the same place in the normal balanced diet as do any other cooked foods.

Canned foods are cooked foods

The ease of serving canned foods is a point to be especially emphasized today. Remember, canned foods are cooked foods. They are ready to eat, just as they come from the can. Therefore, they should *never* be boiled or heated longer than necessary. Prolonged heating not only tends to destroy their flavor, but in some instances results in serious loss of the nutritional value so carefully preserved during the canning process.

Save canned foods' liquid

Another point to impress upon your pupils is the importance of saving the liquid in which canned foods are cooked. This liquid contains vitamins and minerals. Whenever possible, it should be prepared back into the food.

In the case of vegetables, this may be done as follows: First drain the liquid into a saucepan, then boil the liquid down to ½ or ¼ of its original volume. Then add the vegetable to the boiling liquid—*just long enough to heat it fully.*

But, even if you don't wish to use this liquid immediately, *it should be saved for future use.* It is excellent for soup stocks, and to give extra flavor to soups, gravies, and sauces. It also may be used as an ingredient in salads—especially those made with gelatin.

Government approves 3 can sizes

Can sizes have been standardized for efficiency in production by government order. With a few exceptions, you will find canned fruits and vegetables available today in the following sized cans:

No. 2	2½ cups
No. 2½	3½ cups
No. 10	13 cups

Numerous small can sizes—popular with individuals and small families—have been eliminated. This elimination, however, should present no problem, if *just the necessary amount of food immediately required is prepared for serving.* The balance should be put back in the refrigerator for future use. It will keep, the same as any other cooked food.

Some new eye and taste appealing suggestions

- *Serve string beans with horseradish or curry sauce.*
- *Present canned corn in the form of corn pudding, corn chowder, or corn waffles.*
- *Cook an onion or a few mint leaves with canned peas.*
- *Serve beets with an orange juice sauce.*

☆ ☆ ☆

Send for Free Teaching Help

"Help Make America Strong" is a booklet concerning diets, vitamins, menus. Send for sufficient copies for your pupils. *American Can Company, Dept. J-1042, 230 Park Avenue, New York, N. Y.*